



PHOTO BY SHAZAAD KASMANI

LIFTING THE SIEGE

SECURING KENYA'S WILDLIFE

**REPORT PREPARED BY TASK FORCE ON WILDLIFE SECURITY
FOR MINISTRY OF ENVIRONMENT, WATER AND NATURAL RESOURCES
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List of Abbreviations

AAK	Architectural Association of Kenya
AMO	Approved Maintenance Organization
AOC	Airport Operator Certificate
APSEA	Association of Professional Societies in East Africa
AU	African Union
AW	Assistant Warden
ASALs	Arid and Semi-Arid Lands
BMU	Beach Management Unit
CBD	Convention on Biological Diversity
CBNRM	Community Based Natural Resource Management
CBOs	Community Based Organizations
CC	Community Conservancies
CDA	Coastal Development Authority
COMESA	Common Market for Eastern and Southern Africa
CoP	Conference of Partners
CS	Cabinet Secretary
CSR	Corporate Social Responsibility
DPP	Director of Public Prosecutions
DRSRS	Department of Resource Surveys and Remote Sensing
EAC	East Africa Community
ECOWAS	Economic Community of West African States
EIA	Environmental Impact Assessment
EMCA	Environmental Management and Co-ordination Act
ETIS	Elephant Trade Information System
GoK	Government of Kenya
GPS	Global Positioning System
HF	High Frequency
HQ	Headquarters
HR	Human Resource
ICT	Information, Communication and Telecommunication
IAS	Invasive Alien Species
IPCC	Intergovernmental Panel on Climate Change
ISK	Institute of Surveyors in Kenya
JKIA	Jomo Kenyatta International Airport
KAA	Kenya Airports Authority
KAPU	Kenya Airports Police Unit
KCAA	Kenya Civil Aviation Authority
KDF	Kenya Defence Forces
KEFRI	Kenya Forestry research Institute

KEPSA	Kenya Private Sector Alliance
KEPHIS	Kenya Plants and Animals Inspection Service
KENHA	Kenya National Highways Authority
KFS	Kenya Forest Service
KIP	Kenya Institute of Planners
KPA	Kenya Ports Authority
KPR	Kenya Police Reserve
KPS	Kenya Police Service
KRA	Kenya Revenue Authority
KWS	Kenya Wildlife Service
KWCA	Kenya Wildlife Conservancies Association
LEA	Law Enforcement Agency
LMD	Livestock Marketing Division
MOUs	Memorandum of Understandings
MIAP	Moi International Airport
NEMA	National Environment and Management Authority
NGO	Non - Governmental Organization
NIS	National Intelligence Service
NLC	National Land Commission
NP	National Park
NPS	National Police Service
NVG	Night Vision Goggles
NSAC	National Security Advisory Council
PAC	Problem Animal Control
PAMU	Problem Animal Management Unit
PAs	Protected Areas
PPA	Physical Planning Act
SADC	Southern African Development Community
SEA	Strategic Environmental Assessments
SOP	Special Operations
TNA	Training Needs Assessment
UK	United Kingdom
UN	United Nations
USA	United States of America
UNEP	United Nations Environmental Programme
VAT	Value Added Tax
VHF	Very High Frequency
WCMA	Wildlife Conservation and Management Act
WCM	Wildlife Conservation and Management
WRTI	Wildlife Research & Training Institute

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We were appointed at a time when the country was experiencing a saddening wave of poaching of wildlife. There was need to get credible information and find lessons to inform Kenya's choices on how to secure its wildlife for present and future generations. It was also clear that the time had come to review the country's wildlife protection and conservation apparatus, and to determine clearly how best to secure the future. We thank the government, the Cabinet Secretary, the Principal Secretary and all government officials who rightly made the call to appoint the Task Force.

The Task Force got immensely positive response from a wide cross-section of individuals and institutions. It demonstrated that the government's concern was a shared one. Local communities, private land owners, county government officials from across the country, international civil servants, local and foreign experts, private sector and members of the civil society all generously engaged with the Task Force and volunteered information with a view to safeguarding our wildlife. In all places we visited, they generously engaged with us in discussions about their efforts to protect and conserve wildlife, and what they believed needed to be done in the future. Many sent us their views, additional reports, and more information after we left. These discussions and visits proved to be learning experience. We have done our best to capture the issues in our report.

We have not, obviously, included all the suggestions we got from our respondents. But we assure all of them that we carefully considered the contributions in developing this report.

This report, per se cannot bring the necessary change. It is the people we engaged with and the many others who believe in the cause and the ideas in the report who can bring about the desired change. We hope our report makes a contribution to the endeavours towards changing things for the better in so far as wildlife security in Kenya is concerned. We ask for the commitment of all.

Executive Summary

The growing pressure on Kenya's wildlife, evidenced by the recent spike in poaching since 2008, has led to a serious concern that our wildlife is severely threatened. Recent figures are alarming – 134 elephants and 24 rhinos were poached in 2011, 384 elephants and 29 rhinos were poached in 2012, and 289 elephants and 25 rhinos were poached in 2013. If not abated, this illegal off-take of Kenya's wildlife will not only undermine our heritage but also our well-being in environmental, social and economic terms.

In response to this concern, the Cabinet Secretary for Environment, Water and Natural Resources appointed an independent 15person Task Force to examine the security threats to wildlife and their habitat and propose recommendations on how to deal with them.

Accordingly, the first main challenge for the Task Force was to identify the security threats to wildlife and their habitat. This is the focus of Part A of this report. This Part identifies and examines the nature of each threat in several sections. It also examines salient institutional, operational, functional and collaborative systems as they affect wildlife and habitat security.

Part B of the report examines the kind of responses needed to deal with wildlife insecurity. As expected, it pays particular attention to KWS as the key government institution responsible for wildlife conservation. In this regard, it examines KWS's structure, its operations in so far as they affect wildlife security, its work environment, its collaboration with other institutions and its effectiveness in the context of the present needs. In addition, this part examines the vexed issues of Community Conservation, the kind of support expected of the government and the ministry, inter-agency collaboration, the impact of VAT on wildlife security, and the issue of land use planning. The Part concludes with some thoughts on implementation of the recommended changes.

Part C of the report provides the Task Force's summary of recommendations and conclusions. It pays particular attention to the issues that need to be given immediate attention.

It is the Task Force's view that Kenya has the wherewithal to deal with the challenges facing its wildlife sector today. We are still far from reaching the tipping point. It is not beyond recovery. But some serious reforms are required if the current siege on Kenya's wildlife currently is to be reversed.

1. Threats to Wildlife

1.1 Commercial poaching for trophies

Commercial poaching of wildlife for trophies such as ivory and rhino horn represents one of key threats to Kenya's wildlife today. This threat is examined in five stages involving the transfer of the trophy from the animal on the ground to the market.

The report splits the first stage, on the ground situation, into two distinct categories. One category focuses on rhinos. The other category focuses on elephants. This distinction is made because the security arrangements for each of these categories differ. Sanctuaries are used as the principal mode of securing rhinos. Accordingly, the key recommendations concerning the security of rhinos deal with such issues as inadequate fencing, use of modern technologies and resuscitation of the rhino unit. On the other hand, no special sanctuaries are established for elephants., given their widespread seasonal movements. Accordingly, the recommendations proffered for securing elephants take account of their movement patterns as the basis for their protection. In this regard, the Task Force recommends the deployment of quick response units, as is done at Lewa. In addition, specific detailed recommendations are made on the need to improve ranger effectiveness in order to ensure the security of elephants.

The second stage deals with the movement of wildlife trophies. Killing the elephant or rhino is not the end result; there is a chain of activities which takes the trophy out of the hands of the poacher and moves it to the destination market. This chain is driven by individuals, cartels and, more recently, organized crime syndicates. Wildlife crime has therefore to be recognized as a national and international crime and must be treated as such by all national security agencies. This calls for the use of all relevant economic crimes legislation, organized crimes legislation, tax laws, as well as wildlife and environmental laws in dealing with wildlife-related crimes.s

The third stage concerns the exit points, mainly JKIA and Mombasa Port. The Task Force examined these carefully. It emphasizes the need for better collaboration, better screening, better vetting of agents and better detection capability, in combination with a number of other recommendations.

Stage four concerns movement of wildlife trophies across international borders. Kenya is mainly a transit country for wildlife trophies. Any arrangements for wildlife security in Kenya must, therefore, necessarily pay particular attention to the security of Kenya's international borders. Due to time and logistical constraints, the Task Force was unable to visit any of Kenya's main border points. The Task Force recommends the need to designate a small team, under the leadership of KRA security, to follow up on the issue of border security and make more specific recommendations in regard to what needs to be done at the border posts to reduce illegal wildlife trophies entering Kenya.

The fifth stage concern municipal responses needed to secure Kenya's wildlife. The report notes that dealing with wildlife security calls for appropriate action on both the demand and supply side. The recommendations concerning measures to be taken in Kenya seek to address the supply side. Equally important is the need to address the demand. Thus the Task Force makes recommendations on what Kenya should do to reduce or eliminate the demand for ivory and rhino horn locally and internationally.

1.2 Commercial poaching for Bushmeat

Subsistence bush meat poaching has hit unprecedented levels, while the growing commercial bush meat trade is now a highly lucrative business, emerging as a multi-million shilling industry. The problem is so serious that it is posing a great challenge to conservation, and seriously affecting tourism in Kenya's key parks. Yet it is the Task Force's view that this threat is not really on the screen of KWS.

KWS should therefore prioritize Bush meat as a major threat to wildlife conservation. They must galvanize support for cross-sectoral enforcement against bush meat poaching activities at national to village level administration. This should be underpinned by encouraging community and private conservancies and the implementation of incentive mechanisms. There must also be an increase in policing and surveillance of bush meat trade that needs to be scaled up by all enforcement agencies and local administration along all roads leading to cities, urban centres, and major outlets across the Country. The Task Force makes six additional recommendations in the report.

1.3 Pressures on Marine and Coastal life

Kenya has long since recognized the value of its coastal and marine biodiversity, and gazetted many marine and coastal protected areas. The country's rich coral reefs, sea-grass beds, estuaries, mangrove forests and other wetlands resources that occur around the sea provide valuable services for local communities, as well as crucial nursery habitats for marine animals and sanctuaries for wildlife species. In addition, the natural coastal assets have supported and sustained growth in tourism, with substantial economic benefits, such as creation of jobs.

However, given the pressure on land and the illegal grabbing of such land, allied to confusion as to the tenure status on significant areas in the coastal zone, there is a real need to develop capacity at County level to bring order to the current chaos. The Task Force makes several recommendations on how to deal with these issues.

1.4 Conflict killing

Human-wildlife conflicts have become more frequent and severe in recent years. This is mainly due to human population growth, extension of access networks and expansion of agricultural and settlement activities which together have led to increased human encroachment on previously wild and uninhabited areas. As a consequence, there

is a rise in human-wildlife conflicts. Problem animal management and control has unfortunately fallen out of mainstream KWS agenda. This leads to little or very slow response by KWS. Many respondents gave specific examples regarding this matter. Because local communities in wildlife areas perceive KWS to be unresponsive, they respond by taking the law into their own hands and kill wildlife by poisoning, spearing and snaring.

Two critical recommendations are worth highlighting in this regard. The first is the need to undertake proper land-use planning as a basic and, perhaps, the most potent human-wildlife conflict reduction management strategy. It offers, possibly, the best chance for overall and long-term success. It is a preventive approach that tackles the root cause of the problem by creating landscapes in which people and wildlife can co-exist and have as little negative impact on each other as possible. The second is to strengthen community-wildlife facilitation function of KWS outside of the protected areas. This should have comprehensive programmes for education, collaborative management and benefit-sharing with local communities and county governments.

1.5 Other threats

The Report identifies two additional threats to wildlife: bioprospecting (including biopiracy) and the illegal trade in plants (particularly Sandalwood). The issues and recommendations can be found in Sections 2.5 and 2.6.

2. Threats to Habitat

2.1 Protected Areas

Our protected areas are under threat. The threats arise mainly from unregulated and excessive development of tourist facilities, coupled with visitor numbers being in excess of carrying capacity in some parks – with detrimental ecological impacts. In addition, there is considerable incursion of livestock into parks and reserves. Another threat is ecological deterioration of parks. This is particularly the case in closed ecosystems, such as Nakuru National Park. Their effective management requires proper applied research. The new Wildlife Conservation and Management Act provides a strong basis to deal with these issues. The Task Force recommends the need to implement the Act, especially section 44 which deals with gazetted management plans.

2.2 Private and Community Conservancies

Community and private conservancies have emerged as an important wildlife management option in Kenya, providing the best and, probably, only viable option for ensuring that Kenya maintains its wildlife resource and turns around the current decline in numbers and habitat. But there is a need to have wildlife as a legitimate form of land use recognized by other laws such as the Physical Planning Act and not just

by the Wildlife Conservation and Management Act. There is a need to institutionalize benefits and incentives that make wildlife management a viable livelihood option as an alternative solution to the current spate of land sub-division. The land tenure status underpinning the conservancy clearly needs to be understood and agreed. This is also important for securing financial investments. Further, there is need to have well trained and equipped personnel. It is also important to give official recognition to community scouts.

Here, too, the recommendations point to the need to implement the relevant sections of the Wildlife Conservation and Management Act. The critical provisions in this regard relate to setting up of the County Wildlife Conservation and Compensation Committees and producing the guidelines and regulations on incentives and benefit sharing. The recommendations also include having Conservancy community rangers vetted by Kenya Police and KWS and properly trained as KPR's and be included in the KWS and Kenya Police Security arrangements.

2.3 Corridors and Dispersal Areas

Over the past several decades, the quality and quantity of Kenya's conservation corridors and dispersal areas have continued to decline due to diverse reasons which, combined, threaten the security of wildlife. The natural corridors, for instance, are frequently being squeezed by adjacent land uses. In some cases, they are severed by roads, utilities, dams, or other types of human economic development, as well as subdivisions of land. The resultant narrow, constricted and segmented corridors are less effective as travel lanes for wildlife dispersal and other ecological functions. The protected area network is not sufficient to maintain Kenya's wildlife resource. Clearly, if this process continues, then there will be continued loss of wildlife and their habitat. It is important to understand that if tourism is to remain an important sector in Kenya's economic development, the resource base must be protected. This calls for the need to recognize and respect major natural land uses. Wildlife-rich lands ought to be recognized and managed as wildlife conservation areas.

It is in this regard that the Task Force underscores the importance of action research to inform conservation in Kenya. In this regard, the maps prepared by KWS in regard to wildlife corridors and dispersal areas must be made available to agencies involved in planning, and to NEMA. It is also important to put research KWS research products into the public domain. Where such maps are not available, urgent action is required to produce them. On public land, it is vital to request the National Land Commission to zone and gazette these areas for wildlife use. On Community land close liaison should be undertaken with the County land use planning agencies to negotiate wildlife use as a priority, and encourage the creation of community conservancies over these areas, with proper remuneration being paid for contributing the land to a national environmental service.

2.4 Encroachment

Human population growth and development in Kenya are leading to serious appropriation of important wildlife areas for settlement, agriculture, resource extraction and the infrastructure to support these activities, resulting in significant wildlife habitat loss and fragmentation. This encroachment is never done in a planned and structured manner and is already causing irreversible habitat destruction and degradation. This encroachment is also accelerated by increasing drought cycles which bring pressure on livestock grazing. Consequently, livestock increasingly compete with wildlife for ever-diminishing grazing resources. This is particularly evident when large herds of livestock descend on protected areas, as is common in virtually all the parks in Kenya.

The Task Force recommends that the Ministry and KWS ought to work towards urgent formalization of a Land Use/National Spatial plan. Such a plan should recognize and provide for the protection of vital wildlife corridors and dispersal areas. They also need to encourage County governments to gazette wildlife corridors and dispersal areas, especially on community and private land. In addition, KWS and the Ministry need to sensitize key stakeholders to recognize and accommodate wildlife as one of the most sustainable and beneficial land use for the arid regions in the country.

2.5 Development Projects

Many stakeholders expressed concern that development projects do not adequately address environmental issues, particularly those concerning wildlife and their habitats. Examples quoted by stakeholders included the LAPPSET project, the Galana irrigation scheme, various highway projects and KenGen development in Hell's Gate National Park. Smaller projects included the Electricity pylons currently under construction in Nairobi National Park.

A number of issues warrant attention in this regard. Although EIAs are undertaken for these projects, they are rarely brought into the public domain. This failure ignores the important legal provisions provided under EMCA. Further, the EIAs are often weak, unprofessionally presented and lack intellectual rigour. It emerged that EIA licences are issued on preliminary designs but do not seem to be issued in regard to final designs. The challenge seems to be to overcome the perception that the EMCA process is anti-development instead of seeing it as a way of ensuring that proper mitigation measures are incorporated into the design.

Seized of these concerns, the Task Force took time to study the Hell's Gate National Park/KenGen relationship. This included a six-hour site visit. The Task Force noted serious challenges. These are detailed in section 3.5 of the Report. Of all the challenges, the one that needs the greatest emphasis is getting a commitment by all parties that Kenya can have Geothermal development but it should not undermine the other Vision 2030 strategy of keeping our wildlife resources as the basis for growing our economy.

through the tourism sector. The second, and equally important, challenge is getting a much better engagement between the stakeholders where KenGen, in particular, listens much more carefully to what is being highlighted as concerns and suggested remedies. Third, it is vital to get it right here because Geothermal development is being considered in Longonot National Park, Eburru, Soysambu Conservancy, Menengai, Lake Nakuru, Lake Bogoria and Lake Baringo. Some of these areas are World Heritage Sites.

The enormity of the challenges here point towards the need to revise EMCA and strengthen the procedures for EIA and SEA. Secondly it is important to ensure that the public consultation process is consistently and properly applied as required by EMCA. In regard to Hells Gate, the key recommendation is to set up a compliance committee to provide the oversight and monitoring that is urgently needed. This committee should be chaired by the Ministry of Environment, Water and Natural Resources, since national parks fall under that portfolio. Other members should include the Ministry of Energy, KWS, KenGen, NEMA and one or two committed and knowledgeable stakeholders, such as Nature Kenya (Hells Gate NP is an important Bird Area), and possibly the key donors, such as World Bank.

2.6 Other threats

The final two sections on threats to wildlife habitats cover alien species and climate change.

Invasive Alien Species is an escalating problem in Kenya's wildlife habitats. It has already been identified by the KWS as a major threat to biodiversity and the country's economic well-being. Kenya has had several invasions by alien species of plants and animals, including *Prosopis juliflora*, *parthenium*, *lantana camara* and the indian house crow. Section 3.6 of the report spells out why this threat is important. It also raises the a concern that control of invasive species within and around protected areas has been almost non-existent. Efforts have been ad hoc and piecemeal in a few parks. Accordingly, the Task Force recommends the need to have the Wildlife Research and Training Institute (WRTI) develop a database on priority invasive alien species and their impacts on parks' ecosystems. It also recommends the need to develop a multi-sectoral approach, under the guidance of a lead agency, for addressing conflicting perceptions and objectives on whether or not, for example, an alien species is good or bad.

As regards climate change, the main impact has been an increased frequency of droughts and flooding, which has a knock-on impact on ecosystems, wetlands and other habitats. It is likely that over time this will induce shifts in plant distribution, which will further change wildlife seasonal movement patterns. The effect of this will be an increasing occurrence of wildlife outside of protected areas. This will need a careful and sympathetic management with strong community involvement. There is also a need to promote biodiversity and landscape diversity in order to reduce the impact of climate change and to improve the monitoring of ecosystems to understand and respond more quickly to climate change influences.

3. Institutional and Cross Cutting issues

After examining the security threats to wildlife and their habitats in Part A, the Task Force deals with institutional, operational, functional and collaborative systems as they affect wildlife and habitat security in Part B of the Report. This Part necessarily focuses on KWS as an institution, and examines its structure, its operations as they affect wildlife security, its work environment, its collaboration and its effectiveness. The part also deals with the pertinent issues of community conservation, the report required from the Ministry and Government, the inter-agency collaboration required to secure wildlife, the impact of VAT, issues germane to land use planning, and, finally, recommendations on implementation.

3.1 KWS Structure

KWS's structure is inappropriate and incapable of delivering on the institution's mandate. This view was frequently expressed by many respondents, including former and present KWS staff. Many respondents expressed concern that the inappropriate structure has made the organization, particularly at headquarters, lose its way. The key concerns about the structure of KWS include a top heavy organization at headquarter level, an over-fragmentation of departments and units at both headquarters and in the field with a consequence of overlapping functions and unclear reporting lines, an infighting over roles, with poor reporting systems, and a communication process that has also become very much one way between headquarters and the field with much weaker communication occurring between field personnel. There is, consequently, a strong belief, shared by the Task Force, that the core business of KWS has become shrouded with confusion leading to a drop in effectiveness and delivery and loss of motivation and morale in the field.

The Task Force has made several recommendations in regard to the structure of KWS in section 5.1. Three of these are worth highlighting. First, the Task Force proposes that KWS be structured into two main divisions. The first should be the Division of Conservation and Management to deal with protected area functions. The second should be the Division of Community Extension to deal with community conservation functions. Both should be headed by a Director reporting to the Director General.

In addition, there should be a third division to be called the Division of Security Operations. It should also be headed by a Deputy Director reporting to the Director General. The primary role of the head of this division should be to ensure that the security staff are effective, efficient, well trained, well equipped and well-motivated in line with the recommendations made for improving security on the ground. The security staff in particular should then be attached to the head of a protected area or the senior officer in a county responsible for community extension so that they assist in the day-to-day management of those areas. In this regard, it is important to refer to the recommendations made in section 5.7. The Task Force recommends a switch to county

deployment instead of the current eight Regional Conservation Areas.

In essence, the Task Force recommends a major overhaul of KWS. Anything less will not help revitalize KWS to deal with the enormous security threats and the wildlife decline that Kenya is facing.

3.2 KWS Human Resource Management

There is considerable discontentment in KWS in so far as the human resource management function is concerned. This clearly emerged from several representations made to the Task Force by the staff of the organization. The concerns range from lack of transparency and fairness in regards to remuneration, to welfare, promotions, transfers and training. In addition, there is, within KWS, strong factionalism leading to infighting, a culture of not listening to suggestions because of the implications for senior staff, and getting by on a minimum amount of work. It is the view of the Task Force that these issues are seriously hindering KWS in carrying out its mission. They have led to a serious decline in the quality of the Service over the last 5 years. For these reasons, section 5.2 of the report goes into fairly lengthy detail, covering HR planning, recruitment, training, promotions, transfers, remuneration, discipline and welfare.

3.3 KWS Security operations

The task force found out that KWS' Intelligence Unit is weak and employs out-dated methods of gathering, collating, analyzing and disseminating information. This has rendered the Unit ineffective and unable to cope with emerging challenges. The unit is not proactive in preventing poaching and related wildlife crimes. Section 5.3.1 of the report details the issues and provides 20 recommendations on what is required to get the intelligence requirement fully operational. It does on to highlight the need to integrate with other intelligence agencies in Kenya.

As regards investigations, the Task Force found out that there are many instances where accused persons end up being released for lack of evidence, poor investigation of cases or due to other unclear circumstances. In addition, some cases take too long to conclude due to vested interests and complicity of personnel from enforcement agencies. Further, KWS investigations wing lacks the capacity to address emerging challenges. The wing has inadequate personnel and modern technology to enable it process scenes of crime, analyze exhibits and ensure secure custody of evidence. Section 5.3.2 provides 24 recommendations on what is required to get investigations up-to speed within KWS.

Further, KWS has eight operational regions which do not have adequate personnel to undertake operations effectively. The low number of rangers has resulted in overworking, low morale and other welfare issues. The inadequate coverage leads to very poor response to incidences of insecurity. KWS is operating with inferior and some outdated weaponry that does not match the ones used by poachers. There is therefore

a need to ensure that security personnel are deployed strategically (see Sections 5.1 and 5.7). They need to undergo enhanced tactical training to be effective in conservation security duties. Also, the structure of the Security division needs to be reviewed and renamed ‘Security Operations’ division, headed by a highly trained and experienced uniformed officer. There is also an urgent need to modernize communication for operational excellence. Currently, KWS is operating on old technology systems with a severe shortage of radio operators.

The Task Force found that KWS has inadequate transport with an aging fleet with a serviceability state of below 50%. A significant number of vehicles in the field are old and unserviceable, greatly limiting KWS ability to operate. In many stations, vehicles are grounded for lack of effective maintenance. Many of them have fallen beyond reasonable state of economical repair. The Task Force recommends that a detailed survey of the fleet be conducted to quantify the vehicles that need to be replaced. This exercise should also involve developing fleet procurement, management and vehicle deployment policies.

The Task Force also reviewed the Air Wing of KWS. It found out that KWS has inadequate aircraft to provide the management support described above. The current fleet cover in the areas of operations is one plane serving Amboseli and Lamu, while what the ideal case would be one plane for Lamu, two for Tsavo East and Tsavo West, one for Marsabit, and one for Aberdares and Mt Kenya. Some of the aircraft have limited flying duration capability of just about 3 hours. Once the aircraft have left the Air Wing and are out-stationed, there is no monitoring of the use of the aircraft. The Task Force was informed that sometimes the aircraft are used to deliver letters – hardly a wildlife management support task. The key recommendations are that the air wing support needs for KWS should be reassessed in order to bring them up-to-date. Secondly, an aircraft management policy should be developed to clearly address the many outstanding issues such as size of the fleet, replacement process, charter of KWS aircraft vis-a-vis the core business, and the issue of commercial maintenance versus KWS’s aircraft and funding needs.

3.4 Other operational issues

At the moment, deployment of KWS security staff is done on a regional approach for 8 regional divisions. This leads to a disconnect, which severely restricts the KWS ability to respond to where threats are or will be occurring. In other words, this thin spread of personnel across the whole of Kenya ignores the distribution and concentrations of wildlife, and leaves species such as elephants, lions, grevy zebras, hirola and plains animals more vulnerable to poaching. A good example of this is provided by Rumuruti forest, where approximately 300 elephants occur on a seasonal basis but have no security cover when they are there. In many cases, KWS’s security personnel are incapable of responding appropriately. It is strongly recommended that there is a need

to urgently review the KWS's regional conservation approach and harmonize it with the devolved governance structure and the protected areas networks.

Finally, the lack of a Board of Trustees for KWS needs to be addressed. Section 5.8 highlights the need to have a new Board.

The Task Force also considered the issue of the impending merger between KWS and KFS. It recommends that the reformed structure, if it materializes, should adopt exactly the same structure as the one proposed for KWS. It is the Task Force's view that this would be the best way to guarantee integration.

3.5 Community Conservation

A significant percentage of Kenya's wildlife is found outside the network of formal protected areas. Rather, it is found in community areas and, to a lesser extent, on private land. As recognized by the Constitution and by the Wildlife Conservation and Management Act, the custodianship of wildlife must now be assisted by community and private conservancies, if the current siege and consequent decline in our wildlife resources is to be reversed. This assistance by the communities is not going to happen by itself. It will, for example, require a good understanding of the challenges and needs to make community participation in wildlife management a success story. Section 6 of the report provides a detailed analysis of the challenges and makes 15 recommendations, ranging from the facilitation of conservancies, facilitation of their protection, developing better relations with communities, improving problem animal response, implementing the Wildlife Conservation and Management Act, and establishing a good working relationship with the Kenya Wildlife Conservancy Association.

3.6 Inter-Agency Collaboration

The Task Force emphasizes the need for inter-agency collaboration on wildlife security. This is particularly necessary between KWS and such security agencies as the NIS, KPS and KRA – at both national and county level. The other critical institution is the National Land Commission and other key agencies in the land use planning sector. This is spelt out in more detail under section 9 of the Report where four specific recommendations are made. The third important area of collaboration is between KWS, NEMA and Civil Society. The idea here is to ensure that wildlife values are properly considered under Strategic Environment Assessments (SEAs) and Environmental Impact Assessments (EIAs), including undertaking proper public consultation.

3.7 VAT imposition

VAT has become an important issue in so far as wildlife security in Kenya is concerned. The VAT levy which was recently imposed on park entry has negatively impacted the wildlife sector in several ways, including loss of price competitive advantage of Kenya as a tourist destination, decline in tourist visitation, loss of jobs in the tourist industry,

decline of KWS revenue for conservation, and a backlash against KWS from other players in the industry. Furthermore, the imposition of VAT on the wildlife sector has negatively impacted the sustainability of community wildlife. The Task Force recommends the need for re-consideration of levies imposed on the wildlife sector.

4. Implementing the recommendations

The test of the usefulness of this Report lies in its implementation. Many a reports of this kind tend to face considerable opposition from institutions and individuals keen to maintain the status quo. Some of the recommendations in the report are likely to affect specific individuals. Implementing the report will require a clear implementation plan. The Task Force's mandate did not entail the development of such a plan. It is against this backdrop that the Task Force recommends that the Cabinet Secretary appoints a small team of between 5 and 10 capable individuals to develop a comprehensive implementation plan for this Report.

5. Conclusion

The Report constitutes an honest representation of the finding of the Task Force based on its terms of reference. It is a highly condensed version of several volumes of information received over a period of 3 months on the complex array of issues specified in the Task Force's terms of reference. It provides a comprehensive set of some 284 recommendations covering the 9 elements specified in the terms of reference. These recommendations have been condensed into 10 specific issues in the Report's conclusion. These ten issues underscore the key priorities that need to be addressed. Rome was not built in a day, but the building had to start at some point. We believe that this report provides a critical starting point in addressing the insecurity posed to Kenya's wildlife today.

1. INTRODUCTION

1.1. Background

Kenya's wildlife is under siege. The jewel that is the hallmark of the country's crown is under serious and ever-increasing threat from a diversity of sources. The threats can be divided into two main categories. The first category comprises direct threats to wildlife, such as poaching for trophies and commercial bush-meat, killing of wildlife due to human-wildlife conflicts, and the piracy of animals and plants such as birds, reptiles for live trade, microbes and germplasm for medicinal and other industrial purposes (usually referred to as bioprospecting). The other category comprises the threats that indirectly affect wildlife by destroying their habitats. Although the direct threats, particularly poaching linked to wildlife trafficking, more readily take centre stage in discussions about wildlife security in Kenya, habitat destruction poses an equal, if not a greater, threat to the future survival of Kenya's wildlife.

Starting with the first category, the country must urgently and decisively respond to the recent worrying spike in poaching of and trafficking in Kenya's wildlife, driven by a very significant and growing demand for wildlife products, notably in Asia. Illegal wildlife trade is now a multi-billion Dollar business, which attracts transnational organized crime networks of the character and scale easily comparable to other types of global criminal activities, such as trafficking in drugs, human beings, firearms and counterfeit goods. Emblematic species like elephants and rhinoceros are particularly affected by wildlife trafficking to a point where their survival in the wild is in jeopardy. Indeed, poaching for elephant and rhinoceros in Kenya has reached its highest levels since the traumatic period of the seventies and eighties undermining the recovery observed since the establishment of the Kenya Wildlife Service in 1989.

This phenomenon is not just an environmental issue, but threatens the very core of Kenya's socio-economic development. It is seriously undermining Kenya's world-famous nature-based tourism, which remains one of the country's key economic sectors yielding 13% of GDP. Indeed, such tourism is recognized as a key economic driver in Vision 2030.

However, it is not too late for Kenya to deal with the challenge of insecurity posed to its wildlife today. At independence, amidst pessimism that conservation would not be given the priority it deserved by the new African government, President Mzee Jomo Kenyatta unveiled the government policy on wildlife protection during the General Assembly of IUCN held in Nairobi in September 1963 in the following words:-

“The natural resources of this country – its wildlife, which offers such attraction to visitors from all over the world, the beautiful places in which these animals live, the mighty forests which guard the water catchment areas so vital to the survival of man and beast – are a priceless heritage for the future.

He went on to add:

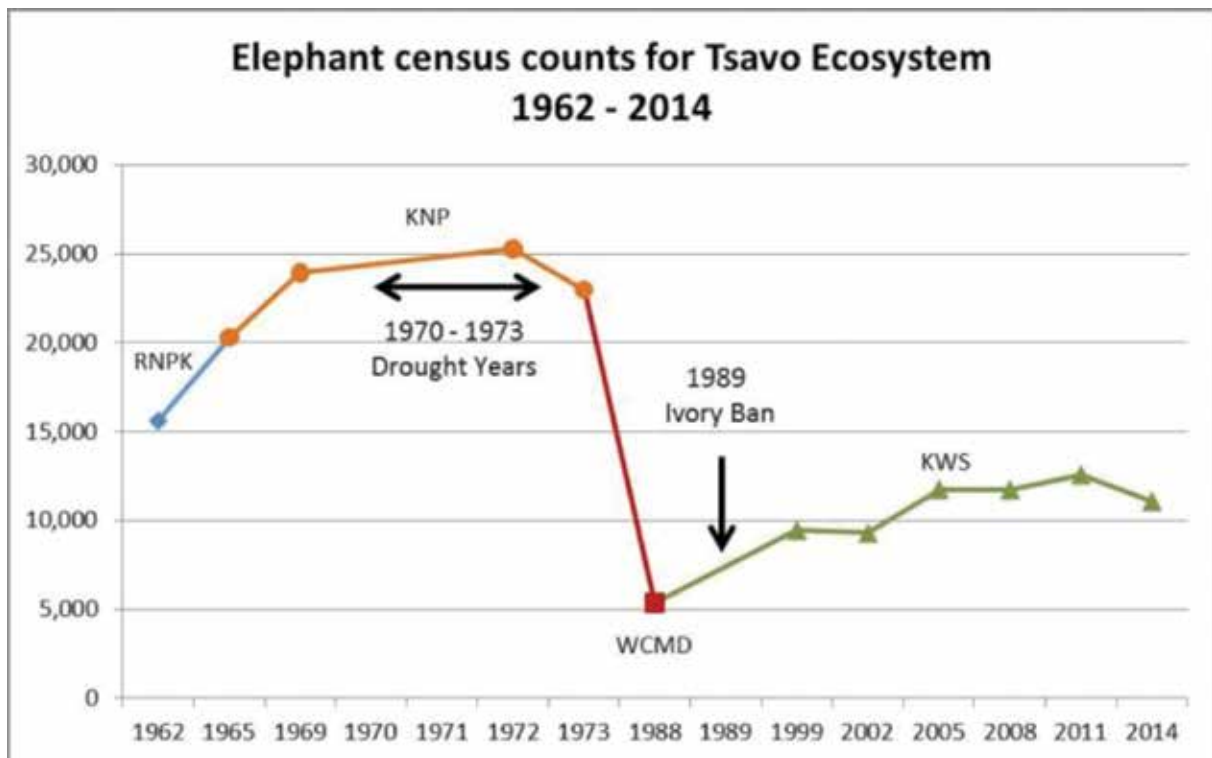
The Government of Kenya, fully realizing the value of its natural resources, pledges itself to conserve them for posterity with all the means at its disposal. We are confident of the cooperation of the other governments of East Africa in this important task, but at present we are unable to provide the specialist staff and money that are necessary. We therefore invite other nations and lovers of nature throughout the world to assist us in honouring this solemn pledge.

This pledge provided great hope and general guidance for Kenya's immediate post-independence wildlife conservation policy. When the further need for a comprehensive approach to wildlife management became obvious in the 1970s, Kenya responded by formulating its first wildlife policy which was embodied in the Sessional Paper No. 3 of 1975 entitled *A Statement on Future Wildlife Management Policy in Kenya*. It identified the primary goal of conserving wildlife as the optimization of returns from wildlife defined broadly to include aesthetic, cultural, scientific and economic gains. Even at this early point in the country's post-independence history, the policy underscored the need for an integrated approach to wildlife conservation and management in order to ensure its sustainability as a key resource whilst minimizing human-wildlife conflicts. Accordingly, the government assumed the responsibility of paying compensation for damages caused by wildlife.

A law, the Wildlife (Conservation and Management) Act of 1976, was subsequently enacted to guide the implementation of the policy. The main feature of the Act was the amalgamation of the then Game Department¹ and the Kenya National Parks to form the Wildlife Conservation and Management Department (WCMD) to manage wildlife in Kenya. But this approach was overwhelmed by the huge illegal killing of, particularly, Elephants and Rhinos taking place in Kenya and elsewhere. It took Kenya to successfully champion and rally the rest of the world to secure the international ban of trade in Ivory in 1989. This successfully curbed the international demand and massive decline in prices, and allowed Kenya under the relatively new KWS to regain control of its elephant and rhino populations. The success was a major achievement for a developing country resulting in immediate collapse of trade globally. But the task was not easy. It took concerted interagency collaboration and suave diplomatic engagement championed by the Head of State to mobilize international support and to establish international regulations to deal with runaway poaching and trafficking of ivory. Consequently elephant poaching declined throughout Africa.

The Wildlife (Conservation and Management) Act was amended in 1989 to establish a new State Corporation the Kenya Wildlife Service (KWS) run by a Board of Trustees.

¹Established by the colonial administration in 1907



Source: David Sheldrick Wildlife Trust

KWS breathed new lease of life into the country's wildlife conservation efforts and to deal in particular with reducing wildlife insecurity. The organization did a splendid job in its first two decades of establishment, and has been rightly credited with the turn-around in the fortunes and recovery of Kenya's wildlife stocks from 1990 to 2007. This can be illustrated by the population surveys undertaken in Tsavo between 1962 and 2014 but with a decline re-emerging from 2011 as shown above. The genesis of the current escalation in price and demand starts in 2008, when CITES allowed China to buy legal ivory, without recognizing that the illegal trade in China would make it virtually impossible to regulate their domestic ivory market. The escalation in prices, heightened demand and entry of illegally sourced ivory into the international trade has caused a resurgence of highly organized poaching and ivory trafficking in the last 6 years, which has caused a considerable worry that Kenya is not coping adequately with the new threats. This has led to the setting up of an independent Task Force by the Cabinet Secretary for Environment, Water and Natural Resources to investigate what issues and problems exist that need to be given real and urgent attention. These issues included an assessment of how well KWS was delivering on its mandate, as can be seen by the Terms of Reference set out in the next section.

1.2. Terms of Reference

The Government of Kenya appointed the Task Force on Wildlife Security to help find appropriate responses to the challenge wildlife insecurity in Kenya via Kenya Gazette

Notice No. 503 of 31st January 2013. The specific terms of reference of the taskforce are to:

- (a) identify and profile the various security threats to wildlife and their habitats;
- (b) examine the implementation of security programmes in relation to all protected areas and wildlife areas across the country;
- (c) assess the adequacy and effectiveness of the security arrangements, equipment and facilities vis-a-vis the emerging challenges;
- (d) assess the staffing strength of the security personnel deployed to provide intelligence and security for wildlife and the protected areas;
- (e) assess the management and security implications of other agencies present in jointly managed areas;
- (f) examine the implementation of the anti-poaching intelligence system or procedures and constraints thereof;
- (g) assess the work environment for wildlife management and security personnel including remuneration;
- (h) assess the operational strategies of the Kenya Wildlife Service in relation to community and private sector engagement, public image and conservation approach; and
- (i) make appropriate recommendations on strategies for the strengthening of the security management of wildlife and their habitats, including systems re-engineering.

1.3. Methodology/Approach

In conducting its work, the Task Force followed the general guidance provided in the gazette notice. The notice provided that in the performance of its functions, the Taskforce:

- (a) shall hold such number of meetings in such places and at such times as the taskforce shall, in consultation with the Cabinet Secretary, consider necessary for the proper discharge of its functions;
- (b) may use official reports of any previous investigations, policies and legislation relevant to its mandate;
- (c) shall conduct public hearings and open forums and receive views from members of the public and receive oral and written submissions from any person with relevant information; and
- (d) may carry out or cause to be carried out such studies or researches as may inform the taskforce on its mandate.

The Task Force was also required to regulate its own procedure.

In line with this guidance, the Task Force adopted a variety of methods to gather and analyze information for this report. These were:

(a) Desk Study

The Task Force conducted considerable review of secondary information. This entailed intensive and extensive library and desk research on wildlife management and security in Kenya. These included literature and reports on: status of wildlife management and trends; threats to wildlife; institutional arrangements for managing wildlife; wildlife management best practices; wildlife surveillance technologies; and legal and policy instruments on conservation. The Task Force also reviewed several wildlife management and conservation project documents, conservation agreements, and documents relating to major development projects likely to have negative impacts on Kenya's wildlife. It also reviewed memoranda submitted by a number of experts and institutions.

(b) Interviews

Interviews constituted the Task Force's main method of gathering information. Extensive face-to-face interviews were conducted with a considerable number of experts, staff of KWS, policy makers, key officers of relevant lead agencies and conservation organizations, representatives of the private sector, land owners, and local communities, among others. Many of the interviews were conducted at formal sittings of the Task Force in Nairobi. But interviews were also conducted during field visits at various field locations and institutions concerned with wildlife security in Kenya.

(c) Field visits, observation and focused group discussions

The Task Force visited virtually all the major wildlife areas in Kenya. It overcame the time constraint by splitting into two groups that simultaneously visited the southern and northern delineated areas. The groups adopted a standard procedure of visiting each designated area and starting with a general plenary discussion with the senior KWS officers. This was followed by face-to-face in-camera interviews with selected senior KWS officers, followed by focused group discussions with KWS rangers. The senior officers were excluded from discussions with rangers. After the discussions with the rangers, the Task Force held focused group discussions with local community, County Commissioners and county government officials. These discussions excluded KWS officers. Members of the Task Force encouraged all interviewees to submit further information or memorandum if they deemed it necessary to do so. The Task Force seized the occasion of each field visit to observe, inter alia, the state of protected areas, group dynamics and relationships among wildlife stakeholders, the observance of protocols and procedures, responsiveness of staff, state of staff accommodation and security equipment.

(d) Public hearings

Given the sensitive nature of security issues involved, the Task Force made a deliberate choice to avoid organizing open air public hearings. But all its field visits concluded with interactive plenary discussions and exchange of views among conservation and County security stakeholders especially the County Security and National Police Teams. Meetings with the latter and KWS covered comprehensive security arrangements within Wildlife areas. These sessions provided useful insights into group dynamics and issues germane to wildlife and habitat security in the areas visited.

(e) Data Analysis

The Task Force did not use structured questionnaire because it did not deem it appropriate for a qualitative work of the kind it had at hand. But it was guided by a set of checklist issues designed to draw responses relevant to the issue of wildlife security in Kenya. The interviews focused on qualitative information, which the Task Force used to draw insights and conclusions into the subject matter under review.

1.4. Organization of the Report

This report presents the findings of the Task Force on Wildlife Security. It is composed of three parts – namely A, B, and C. Part A focuses on the threats to Kenya's wildlife. It specifically examines the direct threats to wildlife, the threats to wildlife habitats, and the institutional challenges facing wildlife in Kenya. The second part, B, provides options for securing Kenya's wildlife. It turns the spotlight on KWS and its systems, the idea community conservation approach, the role of the Ministry and Government, interagency collaboration, VAT, land use planning and implementing the recommended changes. The final part C of the report provides the Task Force's recommendations set out in regard to each of the Terms of Reference and concludes the report.

PART A: WILDLIFE UNDER SIEGE

2. Wildlife Threats

2.1. Commercial Poaching for Trophies

2.1.1 On the ground

(a) Synopsis

Kenya's conservation approach is based mainly on a protected area system. Protection of the two species of greatest concern in the current wave of poaching and trafficking – rhinoceros and elephants – is based on a security approach which is experiencing significant problems. Since the approach to these two species is different, it seems appropriate to discuss them separately.

Rhinos

Kenya's rhinos are of two main descents – the indigenous black rhino stock and the introduced white rhino stock. The Black rhino live and maintain a territorial range which may increase its vulnerability to poachers. Both are, however, under serious threat of extinction as the use of the horn does not distinguish between the two species. The strategy in regard to Rhino protection has been to have them placed in sanctuaries with special protection measures. These sanctuaries consist of enclosed areas in the larger parks such as Tsavo West and Meru or they encompass small parks in their entirety such as Nairobi and lake Nakuru.

The Task Force took the opportunity to visit several rhino sanctuaries and discovered that there are some real issues and challenges which need to be addressed urgently. These include:

1. Fencing

- o The electric fencing design that keeps rhinos inside but is no barrier to keeping humans outside. Any poacher can easily enter a sanctuary.
- o The mechanical chain-link fence is broken or poorly stretched in many places especially in Lake Nakuru Park.

2. Ranger effectiveness

- o The rangers making up the rhino protection units are understaffed leading to very strenuous working hours including working day and night which are compulsory and run for months without breaks.
- o The rangers whilst still committed to their work are demotivated by a lack of interest in their welfare, especially in regard to allowances, leave, housing and perceived punitive transfers.

- o Their motivation is not helped by the current KWS policy of blaming and charging the rangers nearest the poached rhino, before any investigation has taken place.
- o In addition the quality of their clothing; inadequate security equipment in terms of weapons; and specialized equipment, especially night equipment, with night time poaching being the norm leaves much to be desired.
- o Refresher training is not consistent and tends to have too much emphasis on drill rather than bush-craft.
- o Recruitment no longer has adequate regard to living in bush conditions.

3. Old fashioned monitoring techniques

- o The current method of monitoring and protecting the rhinos is based entirely on human patrolling. No use is being made of modern technology which would allow patrolling to be allied to remote sensing techniques for detecting intrusion, etc, backed by a control centre.

4. Disintegration of the Rhino unit at KWS headquarters

- o The research, intelligence and investigation components of the unit have been split away from each other. The reporting lines go to different and seemingly un-integrated units at Headquarters, resulting in delays and inefficiency in response to vital protection measures.

5. Lack of incentives for private owners contributing to rhino protection

- o A commitment to assisting rhino protection in the case of Solio ranch was based on the understanding that a successful programme would allow the owner to sell surplus live rhino. But this initial commercial intention has been so muted that it has since virtually disappeared. Its viability of the idea has remained untested in Kenya due to failure to clarify the underlying philosophy upon which the initial idea was based.

Elephants

Elephant behaviour is very different to rhino behavior They live in groups that undertake seasonal movements which results in them leaving the protected area safety. Indeed the Samburu/Laikipia population covers a wide range of different land tenures. Understanding elephant distribution and movements is therefore critical to their protection. With this in mind, the needs and challenges are as follows:

1. Elephant distribution and movement

- o Whilst there may exist information in regard to where elephants occur and how

they move, this information is certainly not used to assist elephant protection.

- o No or little priority appears to be given to deploying KWS aircraft to undertake elephant surveillance rather than being used for administrative purposes.
- o In line with the 2013 WCM Act, there is a need to recognize that community conservancies and private owners have an important role in assisting the protection of elephants and other wildlife.

2. Ranger deployment and effectiveness

- o The current regional approach to ranger distribution is not aligned to elephant distribution (see Part B of the report, section 5.7) leading to an inability to provide the effective protection cover required.
- o As a result of the above, there is no adequate rapid response capability.
- o Given that elephants occur in community conservancies and private land, there is a need to have a more consistent and co-ordinated approach linking KWS rangers, community scouts and private land security personnel, including having agreements on entry and reporting.
- o The issues reported on under rhino issues (2) above are also relevant to the rangers deployed in the regional platoons.

3. Monitoring/patrol methodology and reporting

- o The existing method relies on foot and vehicle patrols with some air support, moving out from known locations/stations. No use is being made of remote sensing technology, control centres and highly mobile units such as the 9.1 and 9.2 units used at Lewa Conservancy and the Northern Rangelands Trust.
- o The command structure and reporting in KWS is now complex and unclear. This undermines operations and effectiveness. It is common to find officers from the same structure reporting to different people.
- o The reporting lines tend to be from the field to Nairobi and rarely between personnel in the field resulting in a lack of co-ordinated effort.

4. Problem Animal Control

- o The KWS inability to respond to human/wildlife conflict was a constant complaint made to the Task Force. The result of this is a growing resentment and frustration on behalf of the local communities, which in turn has led to a disconnect. The consequence is that KWS gets very little support or information from the communities in preventing poaching.
- o This situation has been made worse by a real decline in the community extension work that KWS should be undertaking (see Part B of the report, section 5.1).

5. Tsavo East/ Tsavo West and neighbouring ranches

- o Immigrant herders from Somalia taking their cattle to the Taita/Taveta ranches is a conduit for undertaking poaching in Tsavo East and West and neighbouring areas. It would appear that the herders facilitate the entry of illegal immigrants and firearms. There needs to be an inter-agency co-ordination in dealing with this problem.

6. Illegal firearms

- o It was a frequently stressed point during the field visits, that there has been a proliferation of illegal firearms at the household level and that this was contributing to the increase in poaching. Again this issue can only be tackled through inter-agency co-ordination.

(b) Recommendations

Rhinos

1. Rhino fencing is upgraded to prevent as much as possible human incursion into the sanctuaries.
2. Install modern remote sensing technology and a control centre to assist in the monitoring and protection of rhino sanctuaries.
3. Reconstitute the HQ Rhino Unit as a single entity.

Elephants

4. Harmonize deployment of personnel with distribution and movement of elephants using a county and protected area approach rather than a regional one.
5. Study the Lewa Control Centre and 9.1/9.2 mobile units system and develop a strategic plan for replicating this approach, followed by its implementation.

General

6. Address as soon as possible the ranger effectiveness issues, by putting in place transparent and accountable human resource plans and processes relating to remuneration, welfare, scheme of service, etc.
7. In implementing recommendation 6, consider recruitment on a fixed term arrangement in line with KDF procedures.
8. Implement the recommendations set out in Part B, section 5.1 in order to have KWS set in place a structure that is simple and effective, has clear reporting lines, encourages collaboration and mainstreams its work in regard to problem animal control and community extension, which will enhance community participation in conservation and information sharing.
9. Under the umbrella of the National Security Advisory Committee (NSAC), develop and implement a strategy to deal with illegal immigration and illegal firearms.

2.1.2 Trophies on the move

(a) Synopsis

Killing the elephant or rhino is not the end result. There is a chain which will take the trophy out of the hands of the actual poacher and move it to the destination market. This chain is driven by individuals, cartels and more recently organized crime syndicates. Those involved in the illicit wildlife products trade often camouflage themselves as exporters of agricultural products or other locally packaged goods under cover of legitimate business in order to conceal the illegal trade. They operate in unique manner including compromising enforcement agencies personnel for official protection.. There is enough evidence, from seizures of wildlife products intercepted along the roads, airports and private/business premises, and the CITES Elephant Trade Information System (ETIS) indicating that trading in wildlife products has heightened since year 2009.

The problem has escalated so much in the recent past to the extent that Kenya has been cited by the Convention on International Trade in Endangered Species (CITES) to be among the eight countries – commonly referred to as the “Gang of Eight” – at the heart of the unprecedented rise in the killing of the African elephants and trafficking of Trophies . These countries comprise source/transit countries (Kenya, Uganda and Tanzania), transit countries (Malaysia, Vietnam and Philippines) and destination countries (Thailand and China).

Unfortunately, the people most usually apprehended are the actual poachers who do the killing and the removal of the trophy from the animal. It is rare to catch those higher up in the chain process. This is probably best explained by admitting that Wildlife legislation and Wildlife Agencies very rarely reach into the domain of the middlemen. It is therefore critical to recognize wildlife crime as a national and international crime, probably ranking third in money terms to the illegal drugs and arms trades. It should thus become part of the responsibilities of agencies such as the NIS, NPS and KRA to mainstream this need.

In this regard, it is worth noting that Kenya has recently enacted new legislation to deal with these challenges. This legislation deals with economic crime and organized crime. It is therefore vital to include wildlife crime under this legislation if there is to be any success in dealing with those who drive this illegal trade. In addition legislation covering tax evasion should also be used.

That said, there are some specific issues that need addressing as follows:

- A number of weaknesses exist in the present system of monitoring trafficking of wildlife products. These include inadequate controls and inspections of vehicles on the roads, ports and parks. Roadblocks are rarely, if at all, equipped to detect

or even be concerned, with issues of wildlife trophies on the move.

- Other challenges include the use of motorcycles, which can avoid main routes. Also used are boats, USVs with camouflaged registration numbers, and goods transport vehicles (like sand harvesting lorries in Mara and Loita plains), water bowzers, etc to transport wildlife products.
- The Task Force also noted the poor practice of inspecting vehicles entering and exiting parks. The need for quick customer service in park entry is not properly balanced with the need to seal security loopholes that can encourage illegal movement of wildlife products and weapons in and out of the protected areas.
- Furthermore KWS lacks a rigorous system for inventorying, tracking and the registration of trophies be they government or privately obtained trophies. There is no clear policy on stock-taking of animal deaths and of trophies in storages. The situation is worsened by the fact that KWS lacks authority to enter/inspect private conservancies/ sanctuaries.
- There are also several unmanned airstrips within or near parks. This makes it difficult to know what's in the aircraft. It is now known that the explosives used in the bombing at Kakambala were taken through Tsavo.

(b) Recommendations

10. Wildlife crime is recognized as a National and International crime and is treated as such by all national security agencies.
11. The National Security Advisory Committee (NSAC) with KWS as a member, has wildlife crime as a main agenda item.
12. KWS undertakes full collaboration with NPS, NIS and KRA in pursuing the agents of wildlife crime using all the relevant economic crime legislation, the organized crime legislation, the tax evasion laws and the Wildlife law, if and when appropriate.
13. KWS and KPS undertake to learn best practice for roadblocks set up to detect illegal wildlife trade.
14. A proper, updated inventory on all game trophies from all sources should be created and maintained on an up to date basis.
15. Need for greater monitoring, inspection, even banning of some suspicious vehicles from entering parks and protected areas.
16. Appoint specialist to advise on best detection technologies available.

2.1.3 Exit points

(a) Synopsis

Wildlife trafficking constitutes smuggling of wildlife and wildlife trophies as well as wildlife products. It also covers plants and organisms. Wildlife trafficking is a clear and present danger for Kenya. Annex 1 provides data on illegal seizures at Kenya's exit

points between 2011 and 2014. The key entry/exit points linking Kenya regionally and internationally are the country's three main airports of Jomo Kenyatta International Airport (JKIA) in Nairobi, Moi International Airport (MIAP) in Mombasa, Eldoret Airport, and the Mombasa port. There are the key inland border points of Malaba, Taveta, Lungalunga, and Namanga but these will be discussed in the next section. These entry/exit points handle very large volumes of luggage, containers, general cargo, and improvised vehicles all of which call for serious challenges in terms of ensuring security without compromising easy and quick movement of goods. Also important in this context is the issue of surveillance of the country's coast line, with over 700 private jetties.

There are multiple institutions involved in various activities and functions relating to facilitation of trade, safety and security at Kenya's entry and exit points. These include the Kenya Revenue Authority (KRA), Kenya Police, Kenya Airports Police Unit (KAPU), National Intelligence Service (NIS), and the Immigration department. But these institutions operate independently of one another with little, if any, structured mechanisms for collaboration.

Other notable challenges noted by the Task Force include:

- cases of 'flying containers' at Kenya Ports Authority (KPA) – i.e. cargo leaving the port without verification of content; cargo handled on "trust" and usually swiftly loaded into ships on arrival at Port.
- cases of unaccompanied luggage with only a forwarding address, which is not necessarily the true destination.
- cargo handling procedures that make it difficult to hold agents responsible.
- corruption by officials of various agencies.
- falsification of declarations of cargo used to traffic wildlife products.
- lack of awareness on the importance of screening and clearance of cargo at the ports of entry/exit by all security agencies coupled with inadequate scanning and inspection of cargo.
- challenge of dealing with diplomatic luggage.
- existence of briefcase companies and "faceless" agents.
- frequently failures of scanning equipment.
- inadequate intelligence from the airlines.
- lack of policies and procedures for handling wildlife products by the airlines.
- inadequate manpower, for example, there is only one (1) KWS officer, Dog handler operating at JKIA, and one officer operating both Mombasa port and Moi International airport.
- inadequate capacities to effectively manage evidence and prosecute wildlife offences.
- lack of authorized and skilled identifiers and laboratories of wildlife trophies.

- lack of clear handling and efficient disposal guidelines and procedures for dealing with captured wildlife trophies.
- lack of clear policy on handling and securing custody of seizures trophies lying in stores under unclear custody.

(b) Recommendations

17. All clearing agents to be pre-registered and vetted with physical addresses for both consigner and consignee. Consider use of biometrics in the data bank.
18. Urgently establish Coast guard unit to monitor our waters to curtail cross border crimes involving smuggling and illicit trafficking of wildlife products, drug/ human trafficking and other organized crimes.
19. Establish a shared database that is easily accessible by all stakeholders and security agencies at entry/exit points.
20. Although CITES allows search of diplomatic luggage, most of the staff at entry/exit points are not aware. There is therefore need to sensitize security agencies staff on the same. Foreign affairs to handle this at a diplomatic level because of heightened insecurity (Terrorism/poaching).
21. For the purposes of the express servicing of cargo, there is a lobby to re-open Gate 14 JKIA .For security reasons, this gate should remain permanently closed.
22. Incorporate all relevant security agencies at the scanning points.
23. Modernize scanning processes with efficient software that have inbuilt analysis of images. Explore possibility of leasing scanners that are maintained by the leasing agency.
24. Install adequate scanning facilities at all points of entry/exit.
25. Establish a structure to operationalize one-stop-shop.
26. Have joint training and induction of newly posted agencies staff. This will cement working relationship and reduce suspicion among the concerned agencies.
27. Introduce strict rules on motorized vehicles carrying trophies, including their forfeiture.
28. Consult Police dog Unit for appropriate information on superior breeds suitable for various tasks. There is also need to deploy adequate dog handlers as KWS has acute shortage of technical personnel.
29. Develop mobile laboratory unit with qualified analysts. Currently such analysis relies on National Museums of Kenya (NMK) to identify trophies.
30. Develop and undertake joint inter-agency training for specialized enforcement Units.
31. Undertake restructuring at all ports of entry so that all stakeholders involved in security matters work jointly and simultaneously.
32. Develop a clear policy on the chain of custody and disposal of wildlife products.

2.1.4. In transit trophies

(a) Synopsis

Kenya's porous borders make it a key transit country, as evidenced by the ETIS report provided to the recent CITES Conference of parties, which clearly shows Kenya to be a major transit player in the movement of ivory to Asia. The Task Force believes that key border points include Malaba, Taveta, Lungalunga, and Namanga. However in the time available, the Task Force was unable to visit any border points and there is a clear need to delegate a small multi-agency team, under KRA security leadership to follow up the Task Force's work and make more specific recommendations in regard to what needs to be done at the border posts to reduce illegal wildlife trophies entering Kenya from other countries

But there are other issues that need to be taken into account. These include the following challenges:

- Some of the border control points are very far from customs offices. For instance, Wajir station is over 120 Kms away from the common border with Somalia. Likewise, Liboi is 18 Kms from the common border with Somalia. Such border points pose serious challenges in terms of regulating and controlling human and motor vehicle traffic. They encourage illicit trade, in all kinds of products.
- Many border points have 'No-man's land' and 'panya routes' problems.
- There is no clear-cut controller of borders. The country's immigration department is the appointed lead agency in terms of border control, but it does not have a presence in some border control points.
- Ordinary light aircraft and transit vehicles could easily be used to transport contrabands across Kenya's borders. This issue is facilitated by the presence of many unmanned air strips.
- There is inadequate screening at border points – especially Malaba border station.
- In addition to personnel problem, old/outdated and cumbersome scanning and verification technologies are used at border points
- Corruption exists at border points.

(b) Recommendations

33. Appoint a small team to visit some key border points and report back with recommendations on what needs to be done. However, MEW&NR should consider the following from wildlife perspective :

- The prioritization of main borders requiring serious attention.
- The establishment of a coordinated structure so as to have on board all security agencies at border control point.

- The establishment of strict monitoring on transit vehicles and keeping those vehicles within designated transit routes.
- The need for specialized border protection units to be used along our common borders.
- The need to automate as much as possible border surveillance processes.
- The implementation of frequent rotation of all agencies staff at the border control points.
- The undertaking of regular sensitization and awareness creation on Ethics & Anti-corruption Act.

2.1.5 Curbing demand

(a) Synopsis

This report reflects a careful consideration of what is needed to be done in Kenya to reduce the pressure on and decline in wildlife populations and habitat. But in regard to the commercial trade in ivory and rhino horn, that is only one side of the equation. In economic terms, the recommendations as to what can be done in Kenya is only dealing with the supply side. It is absolutely critical however that the demand side is addressed. This is because it has been well demonstrated that significantly reducing demand and the value of ivory and rhino horn has greatly reduced the illegal trade in these commodities as can be demonstrated by the real decline in poaching from 1990 to 2007. In other words it is widely recognized that international demand coupled with high prices is the principal driver in the illegal wildlife trade. But there are differences in the dynamics concerning ivory and rhino horn, so it is worth looking at them separately.

Ivory

At the recent 16th CITES Conference of Parties meeting, the Elephant Trade Information System (ETIS) report recognized China as the main importer of illegal ivory accounting for some 70% of demand, with Thailand and possibly one or two other countries in that region accounting for the balance. The genesis of this current escalation in demand starts in 2008, when CITES allowed China to buy legal ivory, without recognizing that the illegal trade in China would make it virtually impossible for them to regulate their ivory market. The net result is that the number of ivory traders in China has remained high. If this is allied to the booming Chinese economy leading to an ability for many more people able to pay for ivory products and allied to the influx of Chinese employees in Africa, then it is not surprising that the demand for ivory has escalated and given that 2008 was a one off sale, this demand can only be met by the illegal trade. This analysis should not be read as suggesting that the Chinese Government is party to the illegal trade. There is no evidence to suggest any involvement by the Government.

Indeed there is growing evidence that the Government is open and willing to try and help address the issue.

China and Thailand are not the only problem countries in the demand for illegal ivory. Some African states have strong illegal domestic markets, which are allowed to operate without hindrance from their Governments. The challenge then is to develop an understanding with China, Thailand and some African States as to the severity of the problem and the great need to ensure that our children and grandchildren can continue to enjoy and benefit from Africa's unique wildlife resources and avoid their extinction. It is also not a problem that Kenya faces alone, so melding the African Range States into a powerful force is also a need. Some ideas on meeting this challenge are provided in the recommendations. But the Task Force feels that the ultimate goal must be to have China shut down any dealings in ivory in China.

Rhino Horn

The ETIS report to CITES COP16 recognizes Vietnam as the main demand destination for rhino horn. It is suggested that the use of powdered rhino horn as a wealth status symbol is one driver. There is also a suggestion that rhino horn is being claimed to be a cure for cancer, thus stimulating demand in the traditional medicine context. However whilst there does not appear to be any dispute over Vietnam's role in rhino horn demand, there is little authoritative information on the market dynamics within Vietnam and on the movement of horn to Vietnam. This information could be hindered by the fact that rhino horn does not lose its value by being in powdered form. Secondly it appears that the market in Vietnam lends itself to manipulation by unscrupulous entrepreneurs, who are unlikely to be very co-operative in providing such information.

The challenge is that, unlike China, who are increasingly engaging with African Countries in strong economic and development partnerships, Vietnam does not have strong international or bilateral engagements. The Vietnamese Embassy in Kenya has not demonstrated any strong pronouncements or positions in the environmental/wildlife arena. Getting Vietnam to become a strong partner in reducing demand for rhino horn is therefore likely to be a bigger uphill task.

(b) Recommendations

34. The Ministry of Environment, Water and Natural Resources to work with the Office of the President and the Ministry of Foreign Affairs in forming a strategy for achieving a reduction in demand for ivory and rhino horn.
35. To work with China at Head of State level, Ministry level and Embassy level to request China to shut down all trade in ivory through their domestic legislation.
36. To complement the bilateral approach recommended under (2) with multilateral approach of African Range States in dialogue with China.

37. To extend the approach recommended under (2) and (3) to Thailand and Vietnam, taking into account the different levels of current relationships.
38. To promote this approach for curbing demand through the African Union (AU), The East African Community (EAC), other African regional alliances (e.g. SADC, ECOWAS), United Nations (UN), United Nations Environment Programme (UNEA) and the G77 group of Countries.
39. To work through the AU to have African States with illegal domestic markets to collaborate on shutting them down.
40. To work with the Chinese Embassy on producing educational material in Chinese, such as leaflets and posters informing on the illegality of purchasing ivory and rhino horn. In the is regard, to encourage and work with NGOs in assisting the production of such material.

2.2. Commercial poaching for Bush-Meat

(a) Synopsis

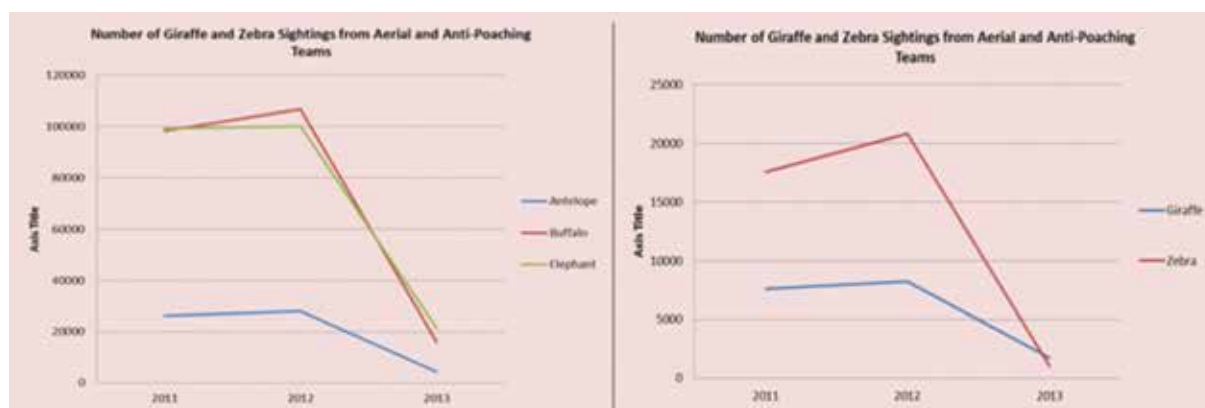
Bush meat has long been part of local consumption in many parts of Kenya. But recent trends indicate escalating incidences of poaching linked to killing of wildlife for bush-meat. The problem is so serious that it is posing a great challenge to conservation, and seriously affecting tourism in Kenya's key parks.

Subsistence bush meat poaching has hit unprecedented levels, while the growing commercial bush meat trade is now a highly lucrative business, emerging as a multi-million shilling industry. For example, in February 2104, a vehicle was arrested on Narok-Maimahiu road with 6,000 kilos of bush meat, which if sold at Kshs 200 per kg, amounts to Kshs 1.2 million. This may well explain the increasing disappearance of wild-game, particularly plains game in major wildlife areas.

The vicious poaching for bush meat is experienced in both protected and non-protected areas throughout the rangelands. All species of wildlife are harvested indiscriminately using snares, bows and arrows, spears, clubbing and occasionally firearms. This practice is unsustainable and could lead to the extermination of many species. A case study in Tsavo indicates that gangs go on poaching expeditions for continuous periods lasting several weeks, during which the meat obtained is dried or ferried wet in motorized transport to the market where it is in high demand. The meat may be transported in vehicles, motor cycles and pedal cycles.

It is estimated that in this Tsavo area alone some 3,000 animals are poached a year yielding about 643,950kg of wet meat. This is clearly not sustainable.

The graphs below shows decline in species numbers between 2011 and 2013.



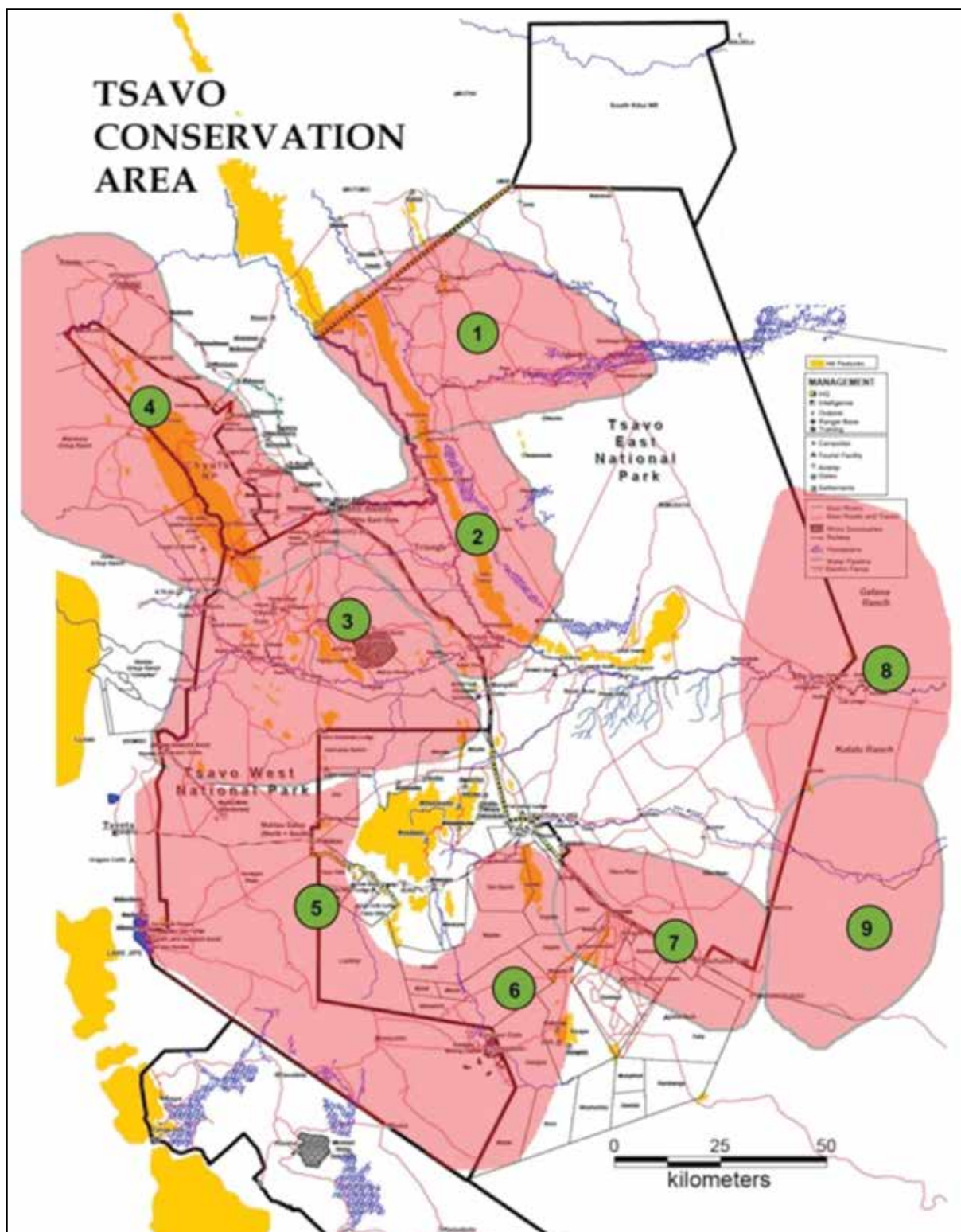
The poaching trends seen on the previous page are replicated across many parts of the country, including Narok, Naivasha, Isiolo, Samburu, Machakos, Kitengela, Namanga, and the Coast. Consequently wildlife has declined or disappeared in most of the areas including parks and National Reserves. Tourism activities in these areas have thus also declined because of low animal numbers. The Northern Tourism Circuit has almost ceased. So what are the challenges?

Challenges of Addressing Bush Meat Poaching

1. Bush meat poaching prevention is not a priority of KWS whose national anti-poaching efforts are directed to stem poaching for trophies.
2. There are inadequate resources and equipment for anti-poaching field operations in combatting the bushmeat trade.
3. The increasing unplanned settlements bordering protected areas, thus creating the opportunity for more people to participate in the bushmeat trade.
4. The rise in the incidence and frequency of droughts that result in widespread decimation of livestock and crop failures in vast areas of the country's rangelands leaving people without food and livelihood sources.
5. The long delay on the wildlife policy and legislative review leading to disenchantment by communities and land owners hosting wildlife, who turn a blind eye to poaching; some see it as a convenient and efficient way of removing animals that don't benefit them.
6. The insufficient scientific data on poaching for bush meat even though off-take for bush meat is a major crisis.

(b) Recommendations

41. KWS should prioritize Bush meat as a major threat to wildlife conservation. Galvanize support for cross sectoral enforcement against bush meat poaching activities at national to village level administration. This should be underpinned by encouraging community and private conservancies and the implementation of incentive mechanisms.



A 2009 study showed 59 poaching Gangs in 9 zones in this Map:

- **Zone 1** – 7 Gangs
- **Zone 2** – 6 Gangs
- **Zone 3** – 7 Gangs (Large Area)
- **Zone 4** – 10 Gangs (Large Area - Intensive poaching)
- **Zone 5** – 8 Gangs (Large Area - Intensive Poaching)
- **Zone 6** – 10 Gangs (smaller gangs either single person or pairs)
- **Zone 7** – 4 Gangs
- **Zone 8** – 4 Gangs
- **Zone 9** – 3 gangs



Picture 1: poacher with bush meat



Picture 2: seized meat



Picture 3: bicycle and snares seized.



Picture 4: snared Dik Dik



Picture 5: snared Cheetah



Picture 6: snares collected

42. Increase policing and surveillance of bush meat trade needs to be scaled up (by all enforcement agencies and local administration) along all roads leading to cities, urban centres, and major outlets across the Country.
43. Enhancing collaboration of law enforcement Agencies at the national level and counties is seen as a cornerstone to combat poaching. The Chiefs and county administration are key to routing out poaching in rural areas.
44. KWS to develop an inclusive multi-disciplinary stakeholder strategy for implementing anti-bush meat initiatives and coordinating efforts to curb the bush meat problem.
45. Undertake proper and elaborate research on bush meat poaching and their markets to ascertain the scope and magnitude of the menace to inform planning and decision making.
46. Develop incentives for private land owners and communities to protect wildlife, which compete with livestock production, often the main income source in such areas.
47. Engage in widespread and vigorously outreach and awareness campaigns through elaborate communication strategies designed to suit specific audiences.
48. Institute proper land/use management practices in wildlife dispersal areas.

2.3. Pressures on Coastal and Marine Life

(a) Synopsis

Kenya has long recognized the value of its coastal and marine biodiversity, and gazetted many marine and coastal protected areas. The country's rich coral reefs, sea-grass beds, estuaries, mangrove forests and other wetlands resources that occur around the sea provide valuable services for local communities, as well as crucial nursery habitats for marine animals and sanctuaries for wildlife species. In addition, the natural coastal assets have supported and sustained growth in tourism, with substantial economic benefits, such as creation of jobs.

But the country's coastal and marine environments are experiencing increasing pressures from several land-based and marine human activities. These can be listed as follows:

Illegal and unsustainable fishing techniques

These techniques include drag net fishing, ring net fishing and the use of dynamite. The drag net fishing destroys coral beds, sea grass beds and other marine life. Ring net fishing if done in inshore waters and marine parks, is unsustainable and greatly threatens the livelihoods of local artisanal fishermen. Dynamite fishing is completely indiscriminatory. There is the added problem of foreign vessels fishing in Kenya's economic zone without respect for Kenya's sovereignty over this zone. These activities

jeopardize the catches of local, small-scale fishermen with serious consequences for food security and income, as well as having long term detrimental impacts on the marine environment and ecology.

Uncontrolled development

There are rapid land use changes occurring along the coastline, affecting beachfronts, mangroves and the long term ecology of our coastal zone. This can be seen by the illegal grabbing of beach front plots, without any regard to the consequences for sea turtle nesting sites; in addition projects relating to mineral extraction, salt mining, residential and tourist development and their related infrastructure increase pollution loads through uncontrolled sewage/effluent disposal. This aspect is not helped by the modification of river flows through damming and irrigation creating detrimental ecological change. Mangroves are critical for marine fish-breeding, but their ecological role is not fully appreciated. There is a strong tradition of using mangrove poles by humans in housing construction and other uses. But with the advent of increasing development along the coast their current utilization is unsustainable. There is therefore a need to map the mangrove areas and develop sustainable harvesting management practices.

Dredging

Dredging, especially that envisaged under the development of Lamu Port, poses serious threats to marine life and therefore to the fishing livelihoods of local fishing communities. The question arises therefore as to whether there is an environmentally sensible way to do it?

Security

Whilst this section is dealing with threats to marine and coastal resources the sea does provide a transport opportunity for the movement of illegal wildlife products. Yet there is currently a very weak marine surveillance and patrol activity. The problem is potentially magnified by the vast length of the coast line with many opportunities to load and off load, using the unmanned jetties that exist. This vacuum needs to be filled.

Some general issues

The coastal natural resources fall under different agencies, such as KWS, KFS and Fisheries. But there is little or no collaboration between them. Whilst the licencing of fish catch is a Fisheries responsibility, the sustainable management of this activity would benefit from better collaboration. Mangroves may be a KFS responsibility, but the local communities should not have to set up Beach Management Units separate from Community Forest Associations. The Task Force learnt that licenses to do with forest harvesting are often issued from Nairobi, without any reference to their local staff.

There is a real lack of marine management expertise in KWS. To give a simple example, marine rangers are often not able to swim and are rarely trained on marine issues.

Given the pressure on land and the illegal grabbing of such land, allied to confusion as to the tenure status on significant areas in the coastal zone, there is a real need to develop capacity at County level to bring order to the current chaos.

(b) Recommendations

49. Bring illegal fishing under proper regulatory control. Gazette the management plan for regulating ring net fishing as a matter of urgency.
50. Investigate best environmental practice in regard to mitigating impacts of dredging.
51. Undertake mapping of extent and abundance of mangrove areas and develop sustainable harvesting management plans.
53. Identify and map turtle breeding areas and have them protected from being interfered with.
54. Liaise with the National Land Commission(NLC) on setting up County land institutions in order to undertake urgently the land use planning process required.
55. Request Ministry of Lands and NLC to assist in stopping illegal land grabbing.
56. Encourage effective collaboration with other lead agencies, private sector and local communities in the management of coastal resources and marine protected areas.
57. Assist in the Enforcement of the relevant laws on protection of marine environments, having particular regard to the application of the Environment Management and Co-ordination Act.
58. Adopt, where appropriate, transboundary approaches to manage marine and coastal resources. This can be achieved within the framework of the Nairobi Convention.
59. Have KWS adopt and implement marine resource management training for staff dealing with coastal and marine resources.
60. Develop and gazette management plans for marine protected areas as soon as possible.
61. Liaise within Government on the need for an enforcement oversight body, like a well-equipped coast guard service, perhaps drawing from American model of homeland security where all security agencies are coordinated and the wildlife agencies use the coast guards to enforce on their behalf those involved in smuggling wildlife products

2.4. Conflict Killing

(a) Synopsis

Conflicts between humans and wildlife have been part and parcel of Kenya's history. The case of man-eating lions of Tsavo stands out as one of the outstanding legends

about the country. But human-wildlife conflicts have become more frequent and severe in recent years. This is mainly due to human population growth, extension of access networks and expansion of agricultural and settlement activities which together have led to increased human encroachment on previously wild and uninhabited areas. The result is greater day to day interaction with wildlife. This situation is then made worse by drought, poor fencing of community areas and homes and competition for access to water.

Yet another influence is the moving of large predators into the communal areas for food due to declining prey, under pressure from habitat loss, bushmeat poaching, etc. This causes domestic livestock to be killed by predators. The impact of the activities of large mammals, e.g. elephants, on farmers and their livelihoods is serious and even traumatic when people are killed.

As a consequence there is a rise in human/wildlife conflict situations, when unfortunately problem animal management/control, as structured today, has fallen out of mainstream KWS agenda. This leads to little or a very slow response by KWS, which was a complaint that was frequently made to the Task Force during its field visits, with some very explicit examples being provided. The system of compensation has also been very slow and uncertain. Because the community residents feel KWS is unresponsive, they respond by taking their own action. This action is most often undertaken by the use of poison, spearing and snaring.

But human-wildlife conflict can be managed through a variety of approaches, encompassing prevention, protection and mitigation measures. Prevention strategies seek to avoid the conflict occurring in the first place and take action towards addressing its root causes. Protection strategies are implemented when the conflict is certain to happen or has already occurred. Mitigation strategies seek to reduce the level of impact and lessen the problem. The main difference between the options is the moment at which the measure is implemented.

(b) Recommendations

63. Undertake proper land-use planning as a basic and, perhaps, the most potent human-wildlife conflict reduction management strategy. It offers possibly the best chance of overall and long-term success. It is a preventive approach that tackles the root cause of the problem by creating landscapes in which people and wildlife can co-exist and have as little negative impact on each other as possible (Muruthi, 2005).
64. Strengthen the community wildlife facilitation function of KWS outside of the protected areas. This should have comprehensive programmes for education, collaborative management and benefit-sharing with local communities and county governments.
65. Undertake adequate responsiveness in dealing with problem animal control

through KWS structural reorganization and in dealing with compensation for wildlife damage in order to reduce the hostility of local communities and increase their damage tolerance levels. This is necessary to prevent them taking direct action themselves, such as hunting down and killing the elephants, lions or other species involved.

66. Encourage and provide incentives for local communities and other land owners to establish wildlife conservancies and sanctuaries in place of other land uses which encourage human-wildlife conflicts.
67. Provide strategic social amenities such as hospitals, predator proof bomas and watering points to create goodwill and reduce impact of human wildlife conflicts.
68. Undertake voluntary relocation of communities and settlements that live too close to important dispersal areas. If carefully carried out without the risk of political exclusion and with promise of better livelihood opportunities, relocation of communities may ease human-wildlife tensions.

2.5. Bioprospecting and (Illegal) Trade in Live Specimen

(a) Synopsis

Bioprospecting is the process of exploration leading to discovery and commercialization of new products based on biological resources. There have been bioprospecting incidents in Kenya that have been conducted without due regard to the laws of the Country or benefits to Kenya or her people. This issue was included in the Convention on Biological Diversity (CBD). See Annex 2.

In the 1980s and 1990s, biologists found that bacterial life has an amazing flexibility for surviving in extremely hazardous environments with extreme conditions most living organisms such as unusually hot or acidic for example the hot springs of the Rift Valley in Kenya. Such unusual organisms are named as extremophiles. Commercial prospectors have been able to use extremophiles to mass produce Industrial-strength enzymes for such products as better and more affordable detergents and cleaner chemicals, fabric softeners, finger-printing reagents sold detergent manufacturers and textile companies and laboratories, earning them billions of dollars annually. See Annex 2.

In 1992, Professors and Students skilled in Bioenergy and Industrial Microbiology from UK and USA, made a Biodiversity Research Expedition to the Lakes of Nakuru and Bogoria. The team was on a mission to collect the lakes' extremophile microbial organisms for bioprospecting. The study isolated two new extremophile bacteria species from the hot geysers of Bogoria and from the shores of the highly alkaline soda Lake Nakuru. The two bacteria are used to produce two enzyme products, one enzyme is used in a detergent, another is used to create the popular faded stonewashed appearance on jeans clothes. In 1998 Genencor commercialized two new highly valuable industrial enzymes originating from Lakes Nakuru and Bogoria; without any

benefits to Kenya or the people of the areas of microorganisms origin. There is growing demand for biological materials from developing countries of high biodiversity for research in developing new products. This demand has led many biodiversity-rich developing countries to exercise their rights over biological resources established by the CBD by enacting national laws and rules to protect their resources. Accordingly Kenya can take steps to strategically control access to its biodiversity by developing suitable laws and mechanisms guide future access.

The concern with bio-prospecting is that the people who are the stakeholders of the biodiversity collected are not consulted or are ignored. Researchers are required to acquire a research permit from the Kenya Wildlife Service or other responsible agency before embarking on such research; however this is often avoided through partnerships with local universities/Institutions, NGOs; Volunteers or Academicians.

Where Permits may be sort, the local management institutions treat the request merely as opportunities to revenue from the issuing of permits rather than focusing on the agreement for revenue sharing in the event of commercially viable innovations.

In addition, Kenya lacks suitable capacity to monitor and control illegal trafficking of tiny organisms with huge industrial potential such as Bacteria.

(b) Recommendations

69. Develop policy and legislation, including the regulations required under the Wildlife Conservation and Management Act in regard to all research and export of Kenya's microbial and genetic resources.
70. Build public capacity to understand the value of microbial and genetic resources.

2.6. Illegal Trade in Plants

(a) Synopsis

There is an increasing illegal harvesting and trade in plants. In Kenya, the species mainly affected to date is sandalwood. The demand is due to their high value for cosmetic, ornamental, medicinal, and cultural ritual purposes. However another group of plants known as Cycads face a future threat.

Sandalwood

The illegal harvesting and export Sandalwood tree (*Osyris lanceolata*) which is protected by the Executive decree through gazette notice no. 3176 of 4th April 2007, appears to be continuing despite its protection by the presidential decree. During the Field visits the Task Force on Wildlife Security heard reports on the ongoing harvesting of Sandalwood in some parts, and on the seized loads to be found at several Police stations in the Rift Valley, Nairobi, Tsavo and the Coast. The task force also engaged with the Kenya Plant and Animal Inspectorate Service (KEPHIS) and KFS on the issue.

According to Misitu News published by Kenya Forest Working Group; the harvesting started in the Kyulu hills. Exploitation accelerated and spread to Taita, Amboseli Kajiado, Narok, Baringo, and the Rift Valley Escarpments; then to Northern parts of Kenya including Isiolo, Samburu, and many other areas across the country. In all the areas, the harvesting is uncontrolled and ongoing in Narok .

Sandalwood is exploited for its essential oils used in perfumery. The heartwood of the trunk, main branches and roots contain an essential oil;. The oil blends well with many fragrance materials that it has become a common blender-fixative used in numerous perfumes. The tree grows to a height of 1-6m, but it's the roots that are most favored as the essential oil concentration is highest in the roots, followed by the trunk. The tree is dioecious (male and female on separate trees) and the female is most preferred as it is said to have a better quality of heartwood. Under normal conditions young trees grow slowly, only gradually developing a core of heartwood. Harvesting methods are highly destructive with the whole uprooting of plants in order to get the roots leading to a serious depletion in its numbers. In addition this form of harvesting undermines its regeneration.

During the peak of the illegal trade in 2005 to 2009 it was believed that the tree was being smuggled into Tanzania using fraudulent documents. The Kenya Forest Service and Kenya Wildlife Service rangers impounded several trucks carrying sandalwood into Namanga, a town bordering Tanzania. . The trees harvested in Kenya were exported through various undisclosed routes to Tanzania. After value addition semi processing, the products are re-exported to Indonesia, India, South Africa, France, Germany and eastern Asia countries for the cosmetic and pharmaceutical industry.

A taskforce of government institutions was formed to look into the harvesting and trade of sandalwood. In its preliminary survey report it said that poverty in the areas where this species occur is an underlying factor that might make the fight against the illegal trade difficult to win.

Communities in these areas are living under extreme poverty and are ready to undertake any kind of business to earn a livelihood, even when they are being exploited. For example, communities around Kyulu National Park earn KShs 4 to KShs 7 for every kilo harvested, which the middleman sells at Kshs 80 per kilo. Successful intervention measures therefore would have to address poverty, and other sources of livelihood. The principle traders included influential businessmen. Arrests of huge quantities and exhibited in courts put an estimated value as high as Sh10 Million in 2012, yet criminal charges against the businessmen were terminated.

In 2013 at the 16th Conference of the Parties of CITES, the species was placed under Appendix II making it mandatory for the requirement of an export/import licensing for sandalwood being taken out of the country of origin. Accordingly KWS as the Kenya CITES management authority is responsible for implementation of the permit system, It is suspected that smuggling in low quantities may still be happening, and a review of the Executive Order is needed to inform the required controls.

Cycads

Cycads are an ancient group of seed plants characterized by a stout and woody trunk with a crown of hard and stiff evergreen compound leaves. Cycads species are relatively few in number and usually have very restricted distributions and possibly face extinction through habitat loss. This rarity value coupled with their attractiveness has made them a much sought after ornamental plant often with a very high economic value. Accordingly many cycads have found a home in public and private gardens around the world.

Kenya has four endemic species occurring in very restricted areas: Loita Hills, Maungu Hill, a Hill in Meru and Mathews Range. All four endemic species have a potentially high commercial value, which could lead to their being illegally obtained and traded and to their eventual extinction. Their conservation status in the wild are unknown, but they occur on community land. The challenge will be to ensure they remain well protected and free of illegal activities with good local community support.

(b) Recommendations

Sandalwood

71. Undertake follow up research on current trade in the species and surveillance within the range areas and road blocks.
72. Follow up on the success in propagation of the tree by KEFRI with a view to promote cultivation of the tree in commercial plantations for sustainable harvest and saving of the wild population.
73. Review the 2007 Executive Order and revalidate it with suitable legislative controls.

Cycads

74. Undertake survey/ research on Cycads to determine their status and current off take for trade and work on a protection plan with community participation.

3. HABITAT THREATS

3.1. Protected Areas

(a) Synopsis

In addressing the threats to wildlife and their habitats, there is a need to explore if the protected areas are providing the necessary security or they are facing issues and challenges. This is important as the protected area network forms the core element for maintaining our wildlife heritage and resources as the foundation for our tourism sector, which is reflected and emphasized in Vision 2030. Any decline in the quality of our protected areas will have a knock on effect in declining our tourism sector, especially as countries like Tanzania and South Africa provide a very competitive alternative.

In addressing this question, the Task Force believes there are issues that need to be addressed. The first of these is that there is an overdevelopment of tourist facilities in some protected areas that exceeds carrying capacity norms, which is bringing a decline in the quality of tourist destinations. A good example of this issue is the Maasai Mara National Reserve. The current situation there is one of too many illegal tourist facilities that are not in compliance with Kenya's licensing procedures. This has resulted. Inter alia, in loss of rhino breeding areas, overcrowding of vehicles deterring the wildebeest crossing the Mara River, and greater involvement in the bushmeat trade.

This issue was recognized during the formulation of the 2013 Wildlife Conservation and Management Act and is reflected in section 44 which states that there can be no developments in protected areas without a gazetted management plan. This requirement has to be also adhered to by Kenya Wildlife Service. There are examples in Nairobi National Park where this has not been the case. Furthermore NEMA must play its role in ensuring that no licenses are issued where section 44 has not been adhered to. In regard to the Maasai Mara, then there will be the challenge of removing the illegal activities.

In regard to the Maasai Mara, the finalization and implementation of the draft management plan is critically important. It is widely held that if urgent action is not taken to address the issues of uncontrolled developments, a point of no return will soon be reached and the deterioration of the Mara will become irreversible, both from an environmental and tourism product perspective. In the greater Mara ecosystem, rapid, unplanned and uncontrolled development of new tourism facilities poses a major threat to wildlife. In some places, back-to-back tourism facilities has created a hard edge along the Reserve border, facilitating illegal entry, while in others, they occupy important wildlife habitats such as riverine forests or potentially reduce wildlife migratory and dispersal areas Likewise, the Amboseli Ecosystem's exceptional environmental and economic values are presently under intense threats from similar pressures.

A second issue is the pressure brought about by the incursion of domestic livestock into the protected areas. This illegal activity is particularly prevalent in Tsavo West, parts of Tsavo East, Meru, Kora, Samburu, and Maasai Mara. This threat is largely influenced by the overgrazing occurring outside the protected areas, the subdivision of land, the presence of cattle derived from Somalia and Tanzania (especially an issue for Tsavo West), lax park management and pressure to allow such protected area incursions from influential sources. However if Kenya wants to sustain its tourism industry, then having livestock occurring in protected areas is a sure way of undermining this sector. As the saying goes “you can’t have your cake and eat it”. In this regard the guidelines required under section 102(4) need very careful consideration. The real solution lies in seeking the better management of grazing and livestock production outside the protected areas and the granting of wildlife user rights as an alternative source of livelihoods.

A third issue, which is probably not clearly recognized, is that Kenya does have in its protected area networks ‘closed’ or ‘island’ ecosystems. Nakuru National Park is a good example but these areas are not restricted to public land. In Lake Nakuru National Park, the Task Force saw excessively over population of buffaloes along with Zebra and to some extent Impala. A similar report has been received from neighbouring wildlife secure farms including Soysambu. These large numbers are a result of consistent population growth of certain species in fenced off animal habitats systems. In such enclosed National parks / conservation areas, overpopulated animals wreak havoc on the ecosystem and surrounding landscape. The overpopulation of buffaloes in Lake Nakuru is a typical case in which grazers are destroying the grass and preventing its recovery. In the process the inedible grass and shrubs species gain dominance, further impeding grass growth there by bringing about a complete alteration of the natural vegetation hindering the diversity of tree species composition, etc.. This rapid spread of unpalatable forage is taking over core areas of the park. This overall plant composition change in turn negatively affects the variety of fauna living of it.

Impacts of species overpopulation include:

- Competition among grazers which will lead to starvation and die offs is inevitable in the near future. Among the high value species expected to be hard hit are the white rhinos which are grazers.
- In nature such starvation extremes it is imminent that this will be followed by emergence of diseases associated with overpopulation of animals. Die offs of many animals can also then be expected.
- Diseases may also spread to other populations of animals that are not overpopulated, upsetting the balance and potentially harming fragile species harmony.

There is therefore a need to prioritize applied research in the management and monitoring of enclosed conservation areas. The science based approach will be necessary beyond Nakuru National Park. In other enclosed areas, where breeding of black rhinos occurs, such as Nairobi National park it is important to avoid fatal fights as happened to two fine rhino bulls in 2013, as a result of over population of the particular species. Over population of Lions in the park is also believed to be the cause of periodic pushing out of young lions into the Kitengela. In June 2012, all the six straying lions were speared to death for killing community livestock.

The challenges these areas provide is that a laissez-faire approach to management can and often does lead to changes that are then strongly regretted. There is therefore a need to look at the objectives of 'closed' protected area in terms what diversity should be aimed for and what are the implications in terms of setting numbers of species like Rhino that should be maintained in such areas. This requires a more scientific approach than has been the case so far. A fourth issue is that there are protected areas that are receiving little or no management attention. Examples of this category include Malkamari, Laikipia, Boni-Dondori, Losai, Nasolot, Tana Rive Primate Reserve and Eland Downs. These areas do have good, and in some cases, unique wildlife, which are under threat from encroachment because no attention is being given to them. This also poses a risk of these areas being used by those who wish to undermine Kenya's security. There is a need therefore to establish a presence by KWS and where that may be difficult then by County or community conservancies. It does not make sense to lose already gazetted wildlife areas, where we face a diminishing resource as detailed elsewhere in this report.

The last issue is a special case related to one specific area. The Task Force visited Solio Ranch as a privately owned Rhino Sanctuary. It was learnt that this ranch might be available for purchase. Notwithstanding the rhino importance of this ranch, it also has the potential to be an area of wildlife importance generally and has a close proximity to Nyeri and Nanyuki. If it was possible to buy it, then it would merit be given National Park status under KWS management.

(b) Recommendations

75. Agencies such as NEMA, KWS and the National Land Commission, must be made aware of Section 44 of the 2013 WCM Act.
76. The implementation of Section 44 of the 2013 WCM Act must be given a high priority so that all protected areas required to have gazetted management plans have them so as to meet this requirement as soon as possible.
77. Remove any illegal development in order to restore the quality of the tourist product.
78. Adhere as much as possible to enforcing Section 102(2) in regarding livestock incursion as an illegal activity.

79. The guidelines required under Section 102(4) should not undermine 102(2)
80. Request the Ministry of Livestock to work closely with pastoralist communities and relevant County agencies to:
 - Rehabilitate grazing outside of protected areas
 - Matching livestock management with seasonal rangeland carrying capacities
81. Use the Northern Rangelands Trust approach to cattle buying.
82. Work with local communities in getting wildlife user rights.
83. Urgently develop the regulations and guidelines in respect of incentives and benefit sharing as required by sections 73 and 76 of the 2013 WMC Act.
84. Develop a scientific understanding of closed ecosystems and of the management decisions that will need to be made, based on applied research.
85. On taking such decisions, implement an applied scientific monitoring system allowing for adaptive management to be applied as and when required.
86. Bring 'unattended' gazetted protected areas under the management of KWS or Counties or Community Conservancies as soon as possible.
87. Purchase Solio ranch and have KWS manage it as a National Park.

3.2. Private and Community Conservancies

(a) Synopsis

Community and private conservancies have emerged as an important wildlife management option in Kenya providing the best and probably only viable option for ensuring Kenya maintains its wildlife resource and turns around the current decline in numbers and habitat. Certainly the 2013 Wildlife Conservation and Management Act recognizes that reality

But both community and private conservancies in the country face numerous challenges. These challenges include:

- The need to have wildlife as a legitimate form of land use recognized by other laws such as the Physical Planning Act and not just by the Wildlife Conservation and Management Act
- The need to have benefits and incentives that make wildlife management a viable livelihood option and that give an alternative solution to the current spate of land sub-division
- The need to have the County Wildlife Conservation and Compensation Committees established as soon as possible
- The need to achieve sustainable economic independence
- The need to have good governance, management and operational structures
- The need to adequately provide protection for the wildlife under their management responsibility
- The need to be protected from unplanned settlement, encroachment and overgrazing occurring adjacent to the conservancy areas

- The need to have the land tenure status underpinning the conservancy clearly understood and agreed. This is also important for securing financial investments
- The need to have well trained and equipped personnel and the community scouts to have a recognized status

(b) Recommendations

88. Form County Wildlife Conservation and Compensation Committees in order to facilitate the registration of community and private conservancies, the preparation of management plans and the conferring of wildlife user rights.
89. The Cabinet Secretary to implement Articles 73 and 76 urgently in order to facilitate the enjoyment of benefits and incentives from wildlife conservation and management.
90. Support the national umbrella body of community and private conservancies namely Kenya Wildlife Conservancies Association (KWCA) to develop standards and best practices for community and private conservancies, including land lease arrangements aimed at strengthening wildlife conservation outside formal protected areas.
91. Provide incentives to those communities willing to facilitate the use of their land for wildlife corridors and dispersal areas and other environmental services.
92. Have Conservancy community rangers vetted by Kenya Police and KWS and properly trained as KPR's and be included in the KWS and Kenya Police Security arrangements.
93. Encourage the Community Land Bill to be fast tracked and enacted in order to avoid misplaced land practices in community areas.
94. Work with the National Land Commission, the Ministry for Physical Planning, relevant County Authorities on getting important wildlife areas properly recognized and incorporated into the land use planning process.

3.3. Corridors and Dispersal Areas

(a) Synopsis

Over the past several decades, the quality and quantity of Kenya's conservation corridors and dispersal areas have continued to decline due to diverse reasons, which combined threaten the security of wildlife. The natural corridors, for instance, are frequently being squeezed by adjacent land uses or are severed by roads, utilities, dams, or other types of human economic development. Large sections of these natural corridors and dispersal areas have been removed to accommodate changing land uses, subdivision practices and urban sprawl. The resultant narrow, constricted and segmented corridors are less effective as travel lanes for wildlife dispersal and other ecological functions.

In some cases, such as the Kitengela and Amboseli- Kimana areas, , these lands are no

longer capable of supporting viable populations of native wildlife or plants. The Task Force field visits revealed that the loss of corridors and dispersal areas was a direct threat to wildlife and plant species diversity in all regions of the country and hence a major national concern. In addition, there seems to be a serious disconnect between the implementation of large national development projects and the conservation of wildlife corridors and dispersal areas. Given the high comparative advantage that Kenya has in Wildlife and the associated tourism sector, this should not be the case.

KWS has done some considerable work in mapping these corridors and dispersal areas, but the information is certainly not used in any land use change or development consideration. In other words, there seems to be very weak consideration of wildlife conservation areas in major on-going spatial planning or development processes. The absence of a National Spatial Plan makes this worse. During the public hearings many of those presenting believed that connecting isolated wildlife habitat areas with corridors should be part of a comprehensive plan to address this growing threat to wildlife survival.

Most of these wildlife corridors and dispersal areas are within Kenya's Arid and Semi-Arid Lands, which are mostly occupied by Pastoral Communities who co-habit with the wildlife. Currently, these areas are shrinking because there have never been any serious efforts by government to appreciate pastoralism as a way of life and recognize the important role it plays by allowing wildlife to live freely among the pastoralists and their livestock using the same resources i.e. water and pasture. At the same time population growth and the encroachment by arable agriculture, settlements etc, needs fresh thinking on how to avoid grazing degradation. It has also not been clearly recognized that tourism is a user of resources with the consequence that there has been a mushrooming of informal tourism establishments and facilities around protected areas as in the case of Kimana, Sekenani and Talek in the Mara ecosystem, greatly exceeding carrying capacities, with real detrimental consequences on wildlife numbers and habitat loss. The land use transformation has also been accompanied by the conversion of former group ranches to individual parcels, leading to the emergence of very small land units incompatible with wildlife land use activities.

Clearly if this process continues, then there will be a continuing loss of wildlife and their habitats. The challenge then is to understand that if tourism is to be an important sector in Kenya's economic development, the resource base must be protected and that land area must be respected as having wildlife use as its priority.

(b) Recommendations

95. The maps prepared by KWS in regard to wildlife corridors and dispersal areas must be made available to agencies involved in planning and to NEMA as well as putting them into the public domain. Where such maps are not available, then urgent action is required to produce them.

96. If not already in use, then GIS software should be used to hold the maps and to allow the monitoring of any changes in the pattern of the use of such areas by wildlife.
97. On public land, request NLC to zone and gazette these areas for wildlife use. On Community land then undertake close liaison with the County land use planning agencies to negotiate wildlife use as a priority for such areas, and encourage the creation of community conservancies over these areas, with proper remuneration being paid for contributing the land to a national environmental service.
98. Where land use change or development is being proposed in such areas, then NEMA needs to ensure that the process required by EMCA is properly followed including proper public consultation.
99. Where wildlife corridors and dispersal areas are gazetted, then apply development controls as allowed in section 16 of the Physical Planning Act CAP 286 in order to prevent land subdivision and other developments.
100. Where appropriate, consider the national acquisition of wildlife corridors and dispersal areas on private land, as allowed under Part VIII of the Land Act No. 6 of 2012.
101. Lobby for fast-tracking of a Community Land Bill enactment in Parliament.

3.4. Encroachment

(a) Synopsis

Human population growth and development in Kenya are leading to serious appropriation of important wildlife areas for settlement, agriculture, resource extraction and the infrastructure to support these activities, resulting in significant wildlife habitat loss and fragmentation. This encroachments is never done in a planned and structured manner and is already causing irreversible habitat destruction and degradation. This portends grave danger for the sustainability of Kenya's wildlife, since habitat loss and fragmentation are recognized as the most common cause for the extinction of species. This is because many of Kenya's species rely on a seasonal dispersal system for feeding and breeding. Transitioning from an open ecosystem to a closed ecosystem, brought about by encroachment, will inevitably bring about wildlife decline.

Rapid and unplanned development of tourism activities on the border of Amboseli National Park are disrupting and even closing wildlife dispersal areas and migratory corridors to the east of the park. The development of back-to-back lodges with elephant-proof electric fences on small plots in Kimana area to the east of the park has enormous impact on the elephant migratory corridors connecting Amboseli with Chyulu Hills and Tsavo West National Park, and the wetlands to the east. On the other hand, the increasing spread of conservation-incompatible land use in the greater ecosystem including sub-division of former community land into small plots, the growing

sedentary behavior of the previously nomadic Maasai pastoralists is rapidly pushing the ecosystem to a point of no return. The environmental and economic potential of the ecosystem is likely to be irreversibly impaired.

This encroachment allied to increasing drought cycles also brings pressure on livestock grazing. As a consequence livestock increasingly compete with wildlife for ever-diminishing grazing resources. This is particularly evident when large herds of livestock descend on protected areas, as is common in virtually all the parks in Kenya.

(b) Recommendations

102. Ministry and KWS to push for the urgent formalization of a Land Use/National Spatial plan which recognizes and provides protection of vital wildlife corridors and dispersal areas.
103. There is need to implement the new Wildlife Conservation and Management Act, especially by:
 1. Setting up the County Wildlife Conservation and Compensation Committees.
 2. Formulation the regulations on benefit-sharing and incentives for keeping of wildlife as a legitimate land use.
 3. Ensuring preparation and implementation of conservancy management plans.
104. Encouraging County governments to gazette wildlife corridors and dispersal areas, especially on community and private land.
105. KWS and the Ministry to sensitize key stakeholders to recognize and accommodate wildlife as one of the most sustainable and beneficial land use for the arid and semi-arid regions in the country.
106. Promote the use of integrated and participatory planning approaches at a wider ecosystem level which:
 - encourage collaboration and coordination,
 - informs stakeholders on what is going on at the ecosystem level, and
 - Provide a forum for conflict resolution, information gathering and dissemination; as well as development of common approaches and their implementation.

3.5. Development Projects

(a) Synopsis

1. General Overview

An issue raised frequently with the Task force when consulting stakeholders was the concern that development projects from small scale to large scale do not adequately address environmental issues, particularly those concerning wildlife and their habitats. Examples quoted by stakeholders included the LAPPSET project, the Galana Irrigation scheme, various highway projects and KenGen development in Hells Gate National

Park. Smaller projects included the Electricity pylons currently under construction in Nairobi National Park.

In examining this concern, the following issues do seem to warrant attention. It would appear that EIAs in regard to these projects are undertaken but putting these EIAs into the public domain and seeking public comments as required by EMCA is often not adhered to and is certainly inconsistent. The EIAs are often weak, unprofessional and lack thoroughness. Environmental licences are issued on preliminary designs and do not seem to be issued in regard to final designs. KWS has maps and information in regard to corridors and dispersal areas but these do not appear to be incorporated in any planning or mitigation recommendations. An example of this would be the Galana irrigation project. Some of these issues are being addressed, as we understand it in the revised EMCA Bill.

The challenge seems to be to overcome the perception that the EMCA process is anti-development instead of seeing it as a way of ensuring that proper mitigation measures are incorporated into the design. It does not assist Kenya's development, say if the High Grand Falls Dam project significantly impacts the flow of the Tana River such that there are major detrimental social, economic and environmental consequences that have been overlooked because of inadequate attention and stakeholder involvement given to downstream impacts. After all, the Tana Delta is an important wildlife area. Another challenge seems to be the lack of resources in NEMA to adequately cope with monitoring what is occurring in the field.

The recommendations are set out below under part 1 – General

2. Hells Gate National Park and Geothermal development

The Task Force, aware of the concerns and representations being made to Government in regard to the Geothermal development in relation to Hells Gate National Park undertook a field visit to the site and met with KWS staff, KenGen staff and specialist expert on the environmental aspects. That visit confirms the need for the Task Force to highlight the issues that emerged.

Firstly, it needs to be recognized that Hells Gate National Park is a prime asset in Kenya's National park network, with unique landscapes. The cliffs themselves have provided nesting sites for 3 endangered Birds of Prey. Two of these – the Lammergeyer and Egyptian Vulture have gone extinct in the park largely due to disturbance factors. The third species – Ruppell's Vulture has significantly declined and is under threat from KenGen activities. This site is one of two known nesting sites in Kenya and the only one occurring in a protected area.

On the face of it, the basis for a good relationship between KWS and KenGen is there, in the form of a MoU but due diligence has not been applied by either party and this has led to some real issues. These issues include the following:

- There is a management plan setting out zones. These zones include ones where

in theory it is agreed no geothermal development will occur. The task force saw firsthand drilling taking place in one of these zones. The KWS Field Team wrote to KWS HQ pointing out this violation. No response has been forthcoming.

- The Task Force has been given in writing that putting the steam pipes underground would be very expensive. Over the ground, these pipes provide a considerable eyesore and certainly interfere with wildlife movements and tourist enjoyment. On site, the Task Force had it confirmed by KenGen that these pipes could go underground for the cost of digging the appropriate trench in exactly the same manner as oil pipes are placed.
- There is an agreement that Well 40 should be shut down because of the risk it poses particularly to the vulture colony due to water overspill into the nesting area. But so far this agreement has been ignored.
- The principle of setting limits to the Geothermal development in Hells Gate was agreed as desirable, but no such limits have been defined or set.
- The equipment used on the wells is substandard and permits unnecessary atmospheric pollution and noise. The standard that should be followed is that provided by the example of Omat 4.
- Environmental monitoring is undertaken by NEMA, Vision 2030, the World Bank and the Electricity Regulatory Board. The experience of the Task Force in getting the information it did in a 6 hour visit, suggests this monitoring is not in any way adequate or thorough.
- Expanding Hells Gate area is seen as a panacea for addressing some of the environmental issue brought about by the Geothermal development. But there is a disconnect here as no amount of expansion can replace the quality of the core area if that is compromised by the development. Related to this is an idea that KWS should own a 'Wellhead' as a way of improving its income. But this should not compromise KWS in sticking to its core business of looking after the National Park to the best of its ability.

The main challenge that therefore need to be addressed is getting a commitment by all parties that Kenya can have Geothermal development but it should not undermine the other Vision 2030 strategy of keeping our wildlife resources as the basis for growing our economy through the tourist sector. The second challenge is getting a much better engagement between the stakeholders where Ken Gen in particulars listens much more carefully to what is being highlighted as concerns and suggested remedies. The third challenge is that it is vital to get it right here because Geothermal development is being considered in Longonot National Park, Eburru, Soysambu Conservancy, Menengai, Lake Nakuru, Lake Bogoria and Lake Baringo and some of these areas are World Heritage Sites. See Annex 3.

The recommendations are therefore set out in part 2 – Hells Gate.

(b) Recommendations

General

107. Have the revised EMCA Bill considered for enactment by Parliament as soon as possible.
108. Encourage NEMA to fast track putting on their website a database showing the status of projects in regard to EIA processes and licence decisions.
109. Ensure that the public consultation process is consistently and properly applied as required by EMCA.
110. Distinguish between a licence issued for preliminary design evaluation and a licence issued on a completed design evaluation.
111. Ensure compliance with Licence conditions are monitored.
112. Have NEMA develop inter agency and private public partnerships in assessing and monitoring EIAs and environmental audits.

Hells Gate

113. Set up a compliance committee to provide the oversight and monitoring that is now urgently needed. This committee should be chaired by the Ministry of Environment, Water and Natural Resources, since national parks fall under that portfolio. Other members should include the Ministry of Energy, KWS, KenGen, NEMA and one or two committed and knowledgeable stakeholders, such as Nature Kenya (Hells Gate NP is an important Bird Area), and possibly the key donors, such as World Bank.
114. Revise, update and convert the MoU into a contract, which can be properly enforced and monitored.
115. Ensure that limits to the Geothermal development in Hells gate are set and respected so that the integrity of the National Park is maintained.
116. Ensure that any economic analysis reflects the economic value of Hells Gate as a national park and not just what is best for KenGen's profit.
117. Ensure that the management plan is strictly adhered to and remedy where the plan has been ignored.
118. Ensure Well 40 is removed as this directly threatens the Vultures.
119. Ensure that environmental best practice is applied to the laying out of the steam pipes and to the noise and pollution emissions from the wells.

3.6. Invasive Alien Species

(a) Synopsis

Globally, Invasive Alien Species (IAS) poses the 2nd biggest threat to biodiversity after habitat destruction. Studies indicate that apart from its detrimental impact on biodiversity, some species also lower depth of underground water table. All countries

which are signatories to the CBD have an obligation to control invasive species (see Article 8(h)).

IAS is an escalating problem in Kenya's wildlife habitats and has already been identified by the KWS as a major threat to biodiversity and the economic well-being of the country. Kenya has had several invasions by alien species of plants and animals including *Prosopis juliflora*, *parthenium*, *lantana camara* and the Indian House Crow. According to a study by Chagema Kadera and Benson Kuria of Kenya Plant Health Inspectorate Service, Kenya has been invaded by 34 species: 11 arthropods, ten microorganisms, nine plant species and four vertebrates.

Prosopis juliflora has been identified as a major problem in semi-arid rangelands. The invasive plants are prominently present around Voi town and making entry into both Tsavo East and West. The invasive is also seen along the Nairobi –Mombasa road. It is thought *prosopis* seeds are introduced into the new areas by livestock from rangelands elsewhere in the country on transit to markets. Livestock feed on the pods but the seeds are not digested dropped in the manure dung thereby germinate in the new grounds. It was introduced into Kenya's dry lands because of anticipated benefits in providing vegetative cover and preventing soil erosion, accordingly this presents a conflict when control is proposed.

While pastoralists from Baringo have clearly advocated against the plant, some scientists have been and is still promote it as a beneficial tree. Promoting the tree by encouraging the utilization of this invasive species can have severe negative long term consequences – if individuals perceive a plant as being useful they will spread it. Whereas it provides some benefits in dry lands, it is a highly invasive and easily displaces and smothers native vegetation in most areas. It quickly colonizes high potential sections of arid lands. *Prosopis* currently covers thousands of hectares of high agricultural potential in Baringo.

Prosopis juliflora forms dense impenetrable stands with long strong thorns; and is an extremely invasive species, which is spreading at an alarming rate (18% p.a.). It now occupies over 500 000 ha. in Kenya and has similarly invaded many other countries on the African continent. It has already invaded Tsavo National Park, yet there are no plans for its removal. If uncontrolled, the spread of the species in the Tsavo parks will cause damaging impacts on its biodiversity with associated degradation of the tourism value of the parks. This IAS species will also invade other Protected Areas (PAs) in the country and its eradication ought to be prioritized.

Lantana camara is yet another IAS that has been identified as a major problem in Shimba Hills National Park. It out-competes indigenous vegetation, impedes movement and spoils park landscapes, It is unpalatable and poisonous to most animals and creates excellent habitat for tsetse flies. The Indian house Crow spreading out of Mombasa presents a major threat to endemic birds by displacing and eating birds eggs and young. Control of invasive species within and around protected areas has been

almost nonexistent; but at most efforts have been ad hoc and piecemeal in a few parks. For example, *Opuntia* species is present and continues to spread in many parks yet not much is done to control it. It is progressively taking up more area in the Nairobi N Park yet not much has been done by KWS to eliminate it despite the small size of the park. Eradication efforts by volunteers such as the Friends of Nairobi National Park have not been successful because they have been infrequent.

Management strategies have included quarantine measures for unintentional and intentional introductions, eradication, containment and control, monitoring and research, regional cooperation and public awareness. More cooperation, assistance and capacity building is required to effectively manage the problem of invasive species. Country wide efforts are not coordinated across sectors, and focused mainly on attempting to address the major invaders in agriculture and fisheries with little efforts in wildlife areas. This happens owing to insufficient resources, capacity or information availability to address the threats to natural ecosystems.

(b) Recommendations

120. Have the Wildlife Research and Training Institute (WRTI) develop a database on priority invasive alien species and their impacts in regard to parks ecosystems.
121. Develop a multi sectoral approach under a lead agency for addressing conflicting perceptions and objectives on whether or not, for example, *prosopis* is good or bad.
122. Build expert capacity in WRTI to undertake risk assessment.
123. Established policies and legislation on control and eradication of IAS, under EMCA if necessary.
124. Arrange adequate financial and human resources and coordinated approach among different relevant sectoral institutions e.g Wildlife and Agriculture to address the spread of IAS in and around Protected Areas.
125. Ensure adequate monitoring of all PAs systems against IAS invasions.
126. Create Awareness and education on IAS.

3.7. Climate Change

(a) Synopsis

Scientific evidence suggests that global warming has considerable disruptive effects on ecosystems. It is causing considerable ecological changes, including habitat modification, changes in phenology or timing of life history events such as breeding of animals and flowering of plants, shifting of animal and plant ranges, and spread of wildlife pest and diseases.

These changes have been reported in the first comprehensive assessment of the extinction risk carried out by the Intergovernmental Panel on Climate Change (IPCC).

The IPCC's assessment records that more than 1 million species could be completely destroyed by 2050 if the current trajectory continues. According to the report, approximately 20 to 30 percent of plant and animal species assessed are likely to be at increased risk of extinction if global average temperature increases by more than 2.7 to 4.5 degrees Fahrenheit.

For Kenya, the main impact has probably been an increased frequency of experiencing droughts and flooding, which has a knock on impact on ecosystems, wetlands and other habitats. Over time, it is also likely that this will induce shifts in plant distribution, which will further change wildlife seasonal movement patterns. The effect of this will be an increasing occurrence of wildlife outside of protected areas, which will need careful and sympathetic management with strong community involvement.

Whilst it is possible to predict this outcome, it is not easy to come up with recommended solutions, because essentially in Kenya's context, we are dealing with mitigation rather than cause. Implementing mitigation processes in the natural world is almost impossible, because the outcomes are so unpredictable. It is expected that clearing of certain extensive natural forest types would aggravate food security in certain areas, e.g., degradation of natural vegetation in and to the east of Tsavo parks would be a risk to successful food production in Eastern part of Kenya.

(b) Recommendations

127. Promote biodiversity and landscape diversity in order to reduce the impact of climate change.
128. improve monitoring of ecosystems to understand and respond more quickly climate change influences.
129. Make the research recommended under (2), a high priority from Wildlife Research & Training Institute (WRTI).
130. Using the management plan process ensure the management and conservation of biodiversity and the sustainable use of natural resources in protected areas will take into account the results of the findings learnt under (2).

4 INSTITUTIONAL ARRANGEMENTS FOR WILDLIFE SECURITY

This report has under part A identified the security threats to wildlife and their habitats; discussed the situation, issues and challenges faced by each threat and come up with recommendations. But the terms of reference require the Task Force to look at institutional, operational, functional and collaborative systems as they affect wildlife and habitat security that need possible re-engineering.

In 1989, the introduction of KWS brought about a much needed approach that led to a successful tackling of the security issues that Kenya then faced. But in the last 5 years or so, the Task Force believes that the quality of KWS as a service capable of adapting in the right direction so as to meet the current challenges has faltered badly. In addition, there is a need to work in line with the Constitution and the new Wildlife Conservation and Management Act. Furthermore, whilst the protected area approach has been the main stay of Kenya's wildlife conservation policy, this will no longer guarantee the long term healthy future for our wildlife. The Task Force sees the involvement of communities and the private sector in managing and protecting wildlife outside of the protected areas as a crucial need.

Part B of the report therefore looks at KWS as an institution in regard to its structure, its operations, particularly as they affect security, its work environment, its collaboration and its effectiveness, in the context of today's needs. This part goes on to look at Community Conservation, Ministry and Government support, Inter-agency collaboration, the impact of VAT, Land Use Planning and finishes with some thoughts on implementing the recommended changes.

PART B: SECURING WILDLIFE

5. RE-ENGINEERING KWS

5.1. KWS Structure

(a) Synopsis

A frequent opinion expressed to the Task Force by ex KWS senior staff and universally expressed by field staff wherever we visited, from Assistant Director downwards, was that the structure of KWS, particularly at headquarters, has lost its way. This was reflected by providing that opinion in terms of a top heavy organization at headquarter level; an over-fragmentation of departments and units at both headquarters and in the field with a consequence of overlapping functions and unclear reporting lines; an infighting over roles, with poor reporting systems and bad reporting; a communication process that has also become very much one way between headquarters and the field with much weaker communication occurring between field personnel.

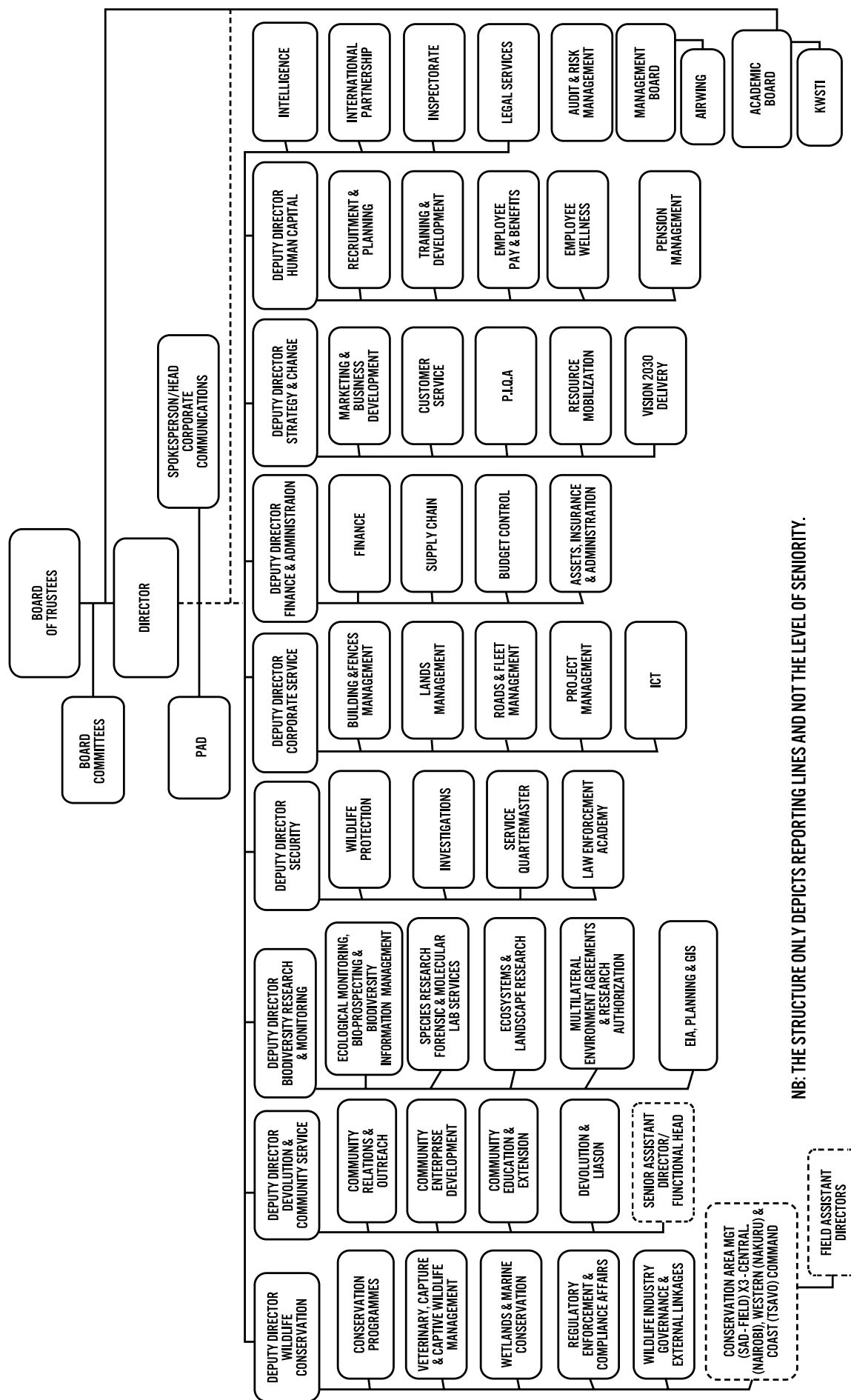
There was a strong belief that the consequences of this are that the core business of KWS has become shrouded with confusion leading to a drop in effectiveness and delivery and loss of motivation and morale in the field. Certainly an example of this is provided by the universally slow response by KWS to problem Animal Control, leading to a growing disconnect with local communities, leading to a lack of information sharing (vital in combatting trophy and bushmeat poaching) and to a rise in ‘revenge’ killing of lions and elephants in particular. A further attribute to structural challenge has been cited as the reason underlying the slow response to poaching incidences.

The Task Force also heard that some KWS staff had been or were implicated in poaching on elephants and rhinos. This has serious implications for KWS as it is a fundamental necessity to have no internal betrayals in conducting security operations. Accordingly the Task Force recommends an appropriate screening of staff as part of the re- engineering process of KWS as outlined below.

In addressing this feedback, the Task Force looked at the current structure, as shown on the next page. This analysis reveals that there are 8 divisions, each headed by a Deputy Director with an additional Deputy Director posted to the Naivasha Training Institute. It is not clear from looking at the functions under each division why it is necessary to have 8 divisions and 8 Deputy Directors. For example, the Division relating to Wildlife Conservation would appear to have a larger work load and responsibility than the combined Divisions of Corporate Service and Strategy and Change.

Problem Animal Control is not shown as a function nor are the Problem Animal Management Units shown in the organogram, yet they are an example of over fragmentation. The Intelligence unit is removed from the Investigation and Protection Units, which has certainly complicated the reporting lines and collaboration required

EXISTING KENYA WILDLIFE SERVICE CORPORATE STRUCTURE



NB: THE STRUCTURE ONLY DEPICTS REPORTING LINES AND NOT THE LEVEL OF SENIORITY.

Functions of the Kenya Wildlife Service (Section 7, WCMA)

7. The functions of the Service shall be to –

- (a) conserve and manage national parks, wildlife conservation areas, and sanctuaries under its jurisdiction;
- (b) provide security for wildlife and visitors in national parks, wildlife conservation areas and sanctuaries;
- (c) set up a county wildlife conservation committee in respect of each county;
- (d) promote or undertake commercial and other activities for the purpose of achieving sustainable wildlife conservation;
- (e) collect revenue and charges due to the national government from wildlife and, as appropriate, develop mechanisms for benefit sharing with communities living in wildlife areas;
- (f) develop mechanisms for benefit sharing with communities living in wildlife areas;
- (g) advise the Cabinet Department on matters pertaining to wildlife policy, strategy and legislation.
- (h) coordinate the preparation and implementation of ecosystem plans;
- (i) prepare and implement national park management plans;
- (j) assist and advise in the preparation of management plans for community and private wildlife conservancies and sanctuaries;
- (k) undertake and conduct enforcement activities such as anti- poaching operations, wildlife protection, intelligence gathering, investigations and other enforcement activities for the effective carrying out of the provisions of this Act;
- (l) ensure application of research findings in conservation planning,
- (m) advise the National Land Commission, the Cabinet Secretary and the Counties on the establishment of national parks, wildlife conservancies and sanctuaries;
- (n) promote and undertake extension service programmes intended to enhance wildlife conservation, education and training;
- (o) identify user rights and advise the Cabinet Secretary thereon;
- (p) grant permits;
- (q) establish forensic laboratories;
- (r) monitor the compliance of terms and conditions of licences; and
- (s) perform such other functions as the Board may assign the Service or as are incidental or conducive to the exercise by the Service of any or all of the functions provided under this Act.

between those units. Related to this analysis, the Task Force learnt that there are 38 Assistant Directors at Headquarters but only 8 in the Field. This structure has also led to an unfortunate consequence of an excessive percentage of the budget, vehicles and other vital resources going to Headquarters rather than to the Field, which has compromised the delivery of service where it is most needed.

To help guide the way forward, the Task Force examined the 2013 Wildlife Conservation and Management Act to familiarize themselves with the functions of KWS as set out in Section 7 (see Box on previous page). Functions 7(a), (b), (d), (e), (f), (h), (i) and (m) all relate specifically to the management and conservation of Kenya's protected areas under KWS care, including establishing good relations with communities actually neighboring such protected areas. Functions 7(c), (d), (f), (j), (n), (o), (p) and (r) all relate to working with communities and private land owners in regard to wildlife management and conservation outside of protected areas.

Linked to these functions would be section 77 mandating Problem Animal Control, which is not mentioned in Section 7. This accounts for 14 out of the 18 functions listed. Of the remaining four, 7(c) and (g) refer to setting up County Wildlife Conservation and Compensation Committees and advising the Cabinet Secretary on policy, strategy and legislative issues. 7(k) provides for the security function and 7(q) provides for a forensic laboratory. This analysis reinforces the viewpoint that there has been a growing disconnect between the core mandate of KWS and its current focus which has in turn hindered the ability of KWS to significantly address the threats in terms of wildlife and habitat security. Furthermore this current focus is not a result of a sudden change but of a gradual 'losing of the plot' over the last 6 years.

The challenge therefore is to get KWS back on its feet as a quality service concentrating on its core mandate with efficiency, effectiveness, transparency and integrity. The following recommendations are therefore intended to address that challenge.

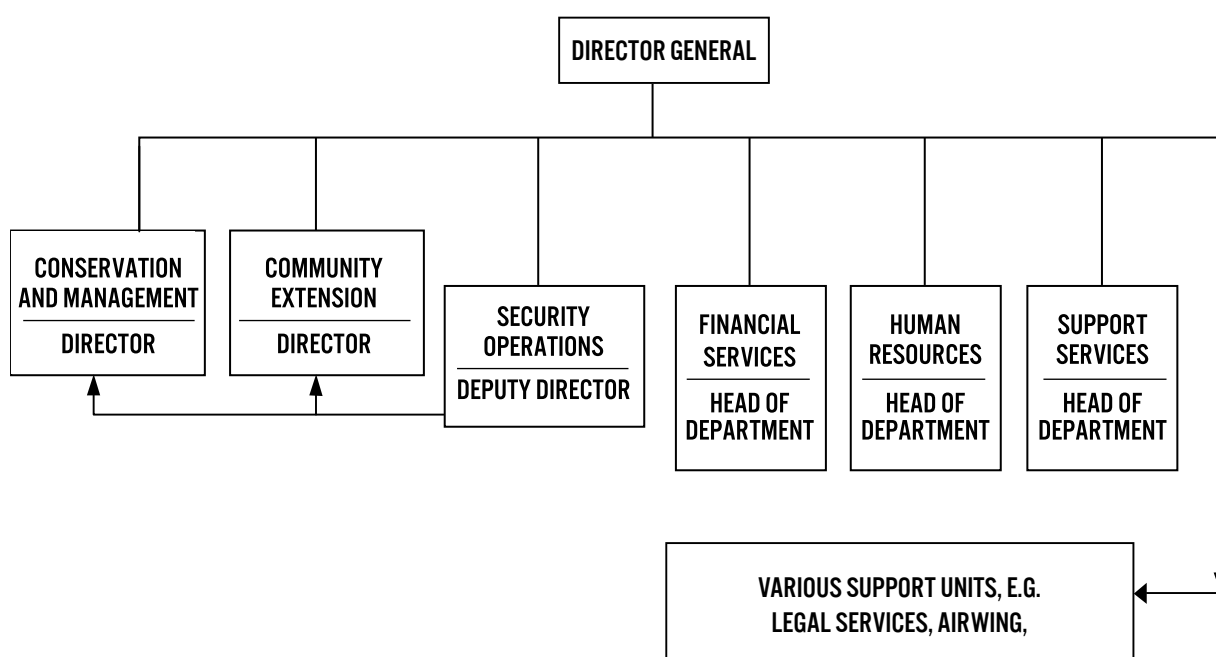
(b) Recommendations

131. KWS should be structured such that it has two main divisions. The first should be the Division of Conservation and Management dealing with the protected area functions. The second should be the Division of Community Extension dealing with the community functions. Both should be headed by a Director reporting to the Director General. The staff deployed in these two divisions should be screened to ensure their commitment to and integrity in wildlife protection.
132. The third division should be the Division of Security headed by a Deputy Director reporting to the Director General. The head of this division should be concentrating on making the security staff effective, efficient, well trained, well equipped and well-motivated in line with the recommendations made for improving security on the ground. Again the staff deployed in this division should be screened to ensure their commitment to and integrity in wildlife protection.

133. The protection staff in particular should then be attached to the head of a protected area or the senior officer in a county responsible for Community extension so that they assist in the day to day management of those areas. In this regard it is important to see the recommendation made below in regard to the 8 current Conservation Areas.
134. These three divisions should be supplemented by a Department for Human Resources, a Department for Finance and possibly a Department of Support Services. The officers in charge should be known as Head of Department, since they are not mainstream wildlife staff.
135. The Department for Support Services could then include specialist support units, e.g. the Veterinary unit, Fleet management unit, Fencing unit. Some units could be standalone ones, e.g. Legal Services, Airwing, etc. In implementing this recommendation careful regard should be given to whether a unit status is justified.
136. The EIA and Planning unit should be strengthened to deal more effectively with involving KWS in land use planning, EIA inputs, etc., particularly in regard to wildlife corridors and dispersal areas.
137. Problem animal control should be mainstreamed into the Division of Community Extension and the Problem Animal Management Units should be dissolved.
138. If a County approach is agreed rather than the current Conservation Area approach, then many of the ADs at headquarters could be reassigned to the field, provided they have the appropriate qualifications and experience.

These recommendations are supported by the organogram shown below.

Recommended KWS Organisational Structure



But this organogram does not highlight the top heavy structure currently prevailing in KWS. As the Task Force understands it, there is 1 Director plus 9 Deputy Directors, at least 9 Senior Assistant Directors and 46 Assistant Directors. Of these 65 senior staff, only 8 Assistant Directors are deployed in the field. The recommendations provided above offer an opportunity to introduce a considerable streamlining. This opportunity would also be assisted by the intended merger of KFS and KWS and by the application of an early retirement scheme.

In making the above recommendations, the Task Force wishes to make clarify that the Terms of Reference did not request it to specifically address the structure of KWS. But the ToRs did ask the Task Force to look at the structure from the point of view of wildlife and habitat security and recommend a reengineering if necessary. This analysis has regrettably provided an understanding that a major overhaul cannot be divorced from revitalising the ability of KWS to deal with the security threats and the wildlife declines that Kenya currently faces. It needs to be stated therefore that the task force is not recommending a patching up of KWS but a major reform. The window of opportunity for such a reform exists under the proposed merger. But this opportunity should also make use of the approaches used by other uniformed agency systems, particularly the Kenya Police Force, adopting a County approach, including the deployment of more staff in Counties rather than in Nairobi and the use of early retirement schemes.

5.2. Human Resource Management

(a) Synopsis

Much discontent was expressed to the Task Force by KWS staff from the level of a Ranger to the level of a Deputy Director. In essence, the comments ranged from a lack of transparency and fairness in regards to remuneration, welfare, promotions, transfers and training. In addition there is within KWS, strong factionalism leading to infighting and back biting, a culture of not listening to suggestions because of the implications for senior staff and getting by on a minimum amount of work. It is the view of the Task Force that these issues are seriously hindering KWS in carrying out its mission and have led to a serious decline in the quality of the Service over the last 5 years.

KWS has multiple human resource issues of concern. The starting point is the human resource management policies and scheme of service. The KWS human resource policy and procedures manual provides the overall framework for policy guidance on human resource management. In addition, KWS's human resource management function follows policy circulars issued by the Government from time to time on management of human resources in the public service in general and state corporations in particular.

The Taskforce established that a human resource policy manual does exist and has been reviewed regularly to meet the changing trends in human resource management. The current edition of the manual was revised in 2006. It covers the following areas:-

- Rules and Regulations governing conduct, in the work place.
- Terms and Conditions of service
- Appointments and Promotion
- Training and Development
- Staff Allowances, Advances and Loans
- Staff Welfare
- Disciplinary Procedures

In addition, the Service has schemes of service which provide career progression guidelines with details such as duties, responsibilities, qualifications and experience required for appointment and promotion for all cadres of staff. Never the less, there are considerable human resource management challenges that need urgent attention at KWS.

Human resource planning

In April 2012 KWS carried out a job evaluation which detailed its human resource plan. According to this plan, the staff establishment was expected to grow from 4328 in 2012 to 6900 in 2018 with an average annual recruitment of 542 new staff as detailed in the following table.

The above human resource plan has however, not been implemented resulting in serious staff shortage in the security related cadres. Indeed, the recruitment of rangers was last carried out in 2011.

But the issue of staff numbers in KWS needs to be approached with caution. The Task Force is of the opinion that KWS is overestablished in several Departments, particularly at HQ, while the rangers cadre is seriously under staffed. A review of staffing will need to be undertaken when a reengineered organization is being developed. It is expected that certain section would have to be down sized while others eg the rangers increased. But the merger with KFS will have a significant bearing on ranger numbers

The above scenario has led to the following human resource management challenges in the security division particularly:

- Whereas there has been over expansion in staffing of supportive Departments of KWS, there is Serious shortage of wildlife security staff as a result few rangers are deployed to cover large areas, consequently, rangers find it difficult to effectively respond to wildlife poaching activities; wildlife human conflict activities; are overworked and therefore fatigued.
- Lack of station/departmental transfers resulting to overstaying in same and sometimes far stations, Yet there are too frequent transfers of staff in some rhino parks.
- Due to staff shortage ranger rarely proceed on leave or off duty as required hence they have little time with their families leading to family separations/breakups.

KWS projected staff establishment 2012-2018

Years	2012	2013	2014	2015	2016	2017	2018
Establishment	4328	4650	5180	5610	6040	6470	6900
Retirement and separation	0	112	112	112	112	112	112
New recruit	322	642	542	542	542	542	669
Optimum establishment	4650	5180	5610	6040	6470	6900	7457

Source KWS revised structure 2012

They are therefore fatigued and demoralized as they have little time to re-energize and rejuvenate themselves.

- Lack of time for refresher courses and personal development.
- Low staff morale.

Security Staff recruitment

Recruitment of wildlife security personnel (rangers) was last carried out in 2011 when 492 rangers and 38 Assistant Warden 11 (AW11) were recruited. It was established that the recruitment criteria for rangers had shifted to a more academic requirement at the expense of suitability to being a ranger living and working in hardship (bush) conditions. This concern was repeatedly provided to the Task Force during the field visits.

It was felt that the following considerations be considered during recruitment of rangers:

- A percentage of the number of rangers recruited should be reserved for recruitment of people from the communities in which the national parks are located. It was argued that this gesture will endear these communities to support and complement KWS effort in wildlife conservation.
- It was also noted that at one time KWS recruited a group of rangers from wildlife suburbs who did not possess the requisite academic qualification but who nevertheless proved to be extremely effective in performance of their duties especially bush skills and operations.
- Besides, KWS management and other major stakeholders informed the Taskforce that rangers coming from wildlife communities possess unique attributes and exhibit behavior which are critical in wildlife conservation personnel. This includes;
 - o Skills in wild animal/poacher tracking.
 - o Ability to stay in the bush/wild for longer period.

- Rangers with superior academic qualifications appeared to join the ranger force as a 'stop gap' measure as they were noted to be less committed to ranger work and generally noted to acquire additional qualifications to enable them be re-designated to other cadres and were seeking transfers to other non-security departments.

(b) Recommendations

139. Urgently recruit additional wildlife security staff (rangers) as provided in its approved human resource plan to address the serious shortfalls, though this need could be modified by the merger of KFS and KWS.
140. Reconsider ranger recruitment criteria so as to provide a percentage of the recruited personnel from communities surrounding wildlife conservation areas.
141. Current academic requirements should be reviewed and counterbalanced to provide for considerations to allow recruitment of people with special skills and attributes suited to ranger work. Over emphasis on high academic achievement has eliminated the hardened tough country candidates who are disadvantaged with formal education yet excellent in bush skills and outstanding tough country/wilderness survival traits.

Training and Capacity Building

In most organizations, a review of training and development needs for staff precedes the decision on the most appropriate approach in dealing with the identified skills gaps. The purpose is to develop robust learning and development plans that are based on research and linking individual, team as well as organizational objectives.

A review of the KWS Human Capital Policy reveals that there does exist training and career development regulations that govern staff training. However, during discussions with staff at both headquarters and field, the following issues were raised:-

- Training opportunities were accorded to only a few employees who were deemed to be 'well connected'.
- Most employees of the ranger cadre were of the view that most training opportunities were taken up by the civilian staff.
- Training opportunities have also been used to accord promotional advantage to favoured officers, thus those without connections lose out on not only training, but also promotions.
- Training is largely supply-driven as opposed to demand-driven, since Training Needs Assessment (TNA) practice has not been institutionalized in the organization. Generally, there lacks data on training needs and one gets a sense of inadequate linkages between training outputs and organizational objectives; lack of monitoring and evaluation mechanisms of measuring training outcomes and impact.

- For a majority of the rangers and field officers there hasn't been any further training since they left college. There were claims of subordinate staff having been taken to LEA for only two weeks training and later promoted to officer level, yet rangers with higher qualifications were left out.
- Within the intelligence staff ranks, despite their low numbers, about 45 of them have not attended any course beyond the two week basic intelligence conversion programme.
- The Taskforce is of the view that although the training and capacity building policy exists, management of the training function needs to be properly handled in order to enhance the sense of equity while contributing value to the organization by providing a way of enhancing skills and necessary competences among staff, which will translate into more productivity and commitment to the organization's core objectives.

(b) Recommendations

142. Training Needs Assessment should form the basis of decisions on staff development, and training enhanced and made progressive to enable individuals learn social skills for purposes of engaging and impacting the communities in which they work more positively. Moreover, the curriculum used at LEA needs to be enriched with contemporary content on community issues, basic laws, bush craft skills, etc.
143. Since community scouts complement KWS on matters of security, there is need to review the cost charged for the scouts' course at LEA as a contribution to community efforts in conservation.
144. There is need to continually assess the transfer of knowledge, skills and attitude to the workplace or determine the cost/benefit of training undertaken through training impact assessments. KWS should strickly adhere to professional standards for conversation of civilian staff to uniformed and disciplined staff.

Promotions

KWS has a promotions policy which declares that the issues of merit, promotion procedures for both uniformed and other category of staff and promotion examinations form the basis of decision of promotions. As a general principle, the policy requires an employee to serve for at least three years before being considered for the next rank or grade. The Management Staff Committee, which is appointed by the Director, comprises of the deputy directors with the Head of Human Capital as the secretary and handles promotions for employees on Job Grades 7 and below. The Board of Finance and Human Capital Committee handles promotions for grades 2 to 6.

In discussions with the Rangers, the Taskforce was informed that a majority of them had remained at the entry grade for their entire working lives, and they attributed their

tribulations to the following causes:

- External influence by persons intent on securing favours for their kin;
- Outright favouritism, cronyism, tribalism by management e.g. some promotions being tailor-made to suit just a few of a favoured lot.
- An 'opaque' system of promotions that 'changes all the time depending on interest', and which does not allow for scrutiny. A case in point is an advertisement for promotion to officer level in 2009, which was later postponed for a period of two years to 2011 on 'realizing that their (management's) favoured candidates had not completed the mandatory length of service indicated in the advertisement. Also there were claims that certain well connected subordinate employees were taken to LEA for only two weeks after which they were promoted to officer level.
- Rangers are required to attend promotional courses, yet no guarantee for promotion even after attending many such courses. There are also rangers who have excelled in their work performance (e.g. assisting in detection and retention of several containers with huge quantities of game trophies, excelling in shooting competition with staff from other forces, a Marine instructor who trains for personnel from other forces who get promoted in their service areas etc) yet there doesn't seem to be a system of recognizing and rewarding such performers in KWS.

(b) Recommendations

145. The whole promotion procedure be reviewed to ensure that promotions, postings, are handled in a completely transparent, fair and competitive manner, based entirely on merit and suitability.

Staff deployment /transfers

The Human Resource Policy addresses the issue of transfer and provides a general rule that an employee shall not be expected to remain in one Field Station for more than five years. Further, while the Director must approve the transfer of Warden II and above for uniformed officers and grade 6 and above for the non-uniformed staff, the Head of Human Capital is allowed to transfer the rest of staff in consultation with the Head of Department concerned.

There were claims of unfair application of the policy, with some staff having been in one station for between 12 and 20 years, while others are frequently transferred. Most of the transfers were effected without due consideration for families. In the case of investigations and intelligence operatives, complaints were centred on their frequent transfers even before they have established important contacts for their operations. Sometime the transfers may affect community wardens who just as they deepen their interaction with the communities they serve, they are transferred. The ones succeeding them may take time before they get the trust of the communities.

KWS management Negligence of skilled personnel as illustrated by TF findings of cases of serious mispostings without due regard to staff skills. Examples include coxswains and marine life savers posted to inland parks, to problem animal control yet non-swimmers were posted to marine parks. Staff with Mountain skill posted to the marine parks Cross departmental transfers occur especially from the security ranks to intelligence section. The common procedure, according to officials, is to advertise for the vacancies internally, and then vet the applicants with a view to getting the most suitable applicants. Since the Intelligence unit is considered a better deployment from the ranger ranks, it is claimed that only well connected rangers are able to move to the unit.

On deployment, the number of rangers is quite low, making it impossible to deploy adequate number of rangers to the field. For example, rangers deployed in twos to guard the rhinos usually patrol their allocated blocks, which in many instances cover an area of ten (10) or more square kilometers, with each patrol session taking over twelve (12) hours. There are also instances where a team of rangers has ten corporals and three rangers, making command and control, which is necessary in a disciplined force, difficult. The patrol pilots are no better, as they are very few in the field. For instance, there is only one pilot patrolling the expansive Tsavo in an aircraft that requires refueling after every 3 hours.

Recommendations

146. The transfer policy is reviewed for purposes of updating and modernizing it; postings should take cognizance of staff skills and qualifications.
147. The number of rangers is boosted to facilitate deployment of adequate numbers for greater effectiveness and efficiency.
148. A system of interdepartmental transfer be developed to cushion against undue influence.

Remuneration and Benefits

KWS has a remuneration policy that guides salary administration, reviews and grading structure. There are 14 Job grades, with the Director occupying the highest grade 1 and support staff occupying the lowest grade 12. The Rangers, who are core to the organization's mandate, are placed at grade 11, at the second lowest point.

The policy also guides the Service on other benefits such as allowances, transport and car loans.

However, the taskforce received complaints on a whole range of benefits and allowances especially from the ranger cadre. These include the following:

- Low basic salary- As noted above, rangers enter the Service at Job Group 11, which is the second lowest grade. Their basic entry level salary is Kshs 12,540 rising to a maximum amount of Kshs 26,400 on a yearly increment of Ks. 880.

Comparable organizations such as Kenya Forestry Service have an entry level salary for their Forest Guards at Kshs 16,000, while the National Police Service Constables have a starting salary of Kshs....

- The rangers have a house supplementation allowance of Kshs. 1610 since they are supposed to be housed by the Service. In cases where they are not housed and their applications for house allowance get the necessary approvals, they are eligible for an allowance of between Ksh. 5,000 to 10,000, depending on their location.
- The leave travel allowance ranges from Kshs 8,000 to 50,000, but the rangers are paid only Kshs. 10,000.
- Other benefits include accommodation allowance while on duty away from the duty station, housing and car loan schemes, and for the ranger cadre, risk allowance and field allowance.
- Regarding the field allowance, the amount of Ksh. 110 was paid to rangers on a continuous 12 hours duty assignment in the field. There was a major complaint due to the difference in the amount paid to the “crack” squad comprising of personnel from KWS, police and other agencies whose daily allowance had been raised to Ksh. 500, despite the fact that both teams went for security operations together.
- The Taskforce studied the documents submitted to the Salaries and Remuneration Commission for review of salary and other allowances, and found out that KWS had requested for a flat rate of 10% salary increment across the board, which was detrimental to the officers in the lower ranks, while benefitting employees in higher ranks. Most rangers were also aware of this and it formed the basis of their claims of biased increments.

(b) Recommendations

149. A review of the salary structure to ensure parity.
150. A review of the placing (upgrading) of the ranger cadre, possibly by a grade. This may however be taken care of by the merger of the related parastatals as was directed by the Presidential Taskforce on Parastatal reforms.
151. Harmonization of the field allowance on the basis of ‘equal job equal pay’. There is danger in paying personnel doing the same job, on the same rank, differently, especially in a security related function.
152. House allowance should be paid to deserving rangers without unnecessary bureaucracy, and possibly a policy on housing should be developed/reviewed to guide decision making. Housing allocation in all stations should be handled by a committee with ranger representation.

Staff Discipline

The disciplinary control of the staff of KWS is vested in the Board of Trustees, and to others to whom the authority to discipline is delegated. The specific regulations are as contained in the Wildlife Conservation and Management Act, 2013, the Service Code of Conduct and Ethics, the Employment Act, and the Public Officer Ethics Act, 2003. Discipline procedure for the uniformed staff is, in addition to the above legislations, governed by the Armed Wing (Disciplinary) Code. Gazetted officers are, however, not subject to orderly room proceedings.

An analysis of the rangers turn over through disciplinary procedures over a period of five years reveals as follows:

KWS Rangers turnover

Year	Dismissal	Removal	Resignation	Terminated	Total
2009	20	14	4	9	47
2010	10	9	1		20
2011	9	5	2		16
2012	6	6	2		14
2013	10	8	11		29
					126

During the same period of five years, KWS recruited only once in 2011 (500 recruits). It means therefore that on the average, KWS lost over 25% of its net recruitment contribution through disciplinary procedure. When adding this number to other natural attrition factors such as death, retirement on age ground as well as voluntary retirement, it is clear that the Service needs a comprehensive relook at its HR policies and practices.

The Taskforce received a lot of complaints relating to disciplinary procedures. Specifically, the rangers claimed that the disciplining process was harsher to them than their seniors, and more often than not they ended up bearing the brunt of consequences for omissions and commission emanating from their bosses. It is also evident that rangers are charged and disciplined prior to any proper investigations, as witnessed by the Task Force in regard to rangers and rhino poaching incidents

(b) Recommendations

153. The whole disciplinary procedure be reviewed to ensure that investigations are handled by competent, objective personnel before a final decision is made, to ensure fairness and justice to the accused.
154. Review the policies and orderly room proceedings manual to align them with the

current constitution and other related legislations; and those of other uniform disciplines.

155. Step up provision of staff welfare needs, lack of which may be contributing to indiscipline.

Staff Welfare

Staff welfare refers to benefits that an employee receives from the employer. Such benefits include: various allowances, housing, transport, medical, insurances, annual leave, sick leave, food, rations, etc. The Human Capital Manual has sections clearly indicating the various aspects of employee welfare. For instance, in the housing policy part of the manual, allocation of staff Quarters is the responsibility of the Warden in Charge, and the policy calls for fairness and sensitivity to each deserving employee's housing needs.

The Taskforce heard from the employees on various aspects of their welfare and made the following observations:

- Rangers live in pathetic conditions in most areas. Their housing needs require urgent attention. Close by example at the Nairobi Park Mbagathi Gate housing by the Central workshop area Name of gate. There is need to develop a 'fit for purpose' housing strategy, as opposed to erecting very expensive flats/housing blocks that, at the current rate and cost, will take a long time to meet the housing needs of KWS. The task Force was told the 12 unit storied building cost in excess Kshs 56 million to put up. With a chosen house guided by fit for purpose' housing strategy; many more units could have been put up with the same cash.
- All allowances and policies relating to employee benefits may require to be reviewed to ensure that they address the welfare issues of the employees in an equitable manner. Employees should also be sensitized about the policies, as some of the complaints are as a result of lack of adequate information. For instance, the out-patient cover for the highest employee in KWS is Ksh. 35,000 while the lowest is covered at Ksh. 20,000, hence not skewed as much as the rangers alleged.
- Off days are important for the rangers especially since they spend much of their time in the bushes. Short leave breaks last only 5 days, travel days included yet some would spend two days of travel to get to their home and two days to return; consequently many rangers default in returning back to work; counter disciplinary action follows. The Service needs to review the number of off days after duration in the field, with a view to treating each conservation area depending on hardships experienced. Travel days should also not form part of the off days, especially bearing in mind that the staff come from different areas of the country.



Photo 7: Ranger accommodation at Lake Nakuru NP



Photo 8: Ranger accommodation at Nairobi NP

(b) Recommendations

156. Undertake an urgent audit of housing, allowances, leave, etc. so that the extent of the problem is properly quantified.
157. Develop and implement a remedial plan that is properly monitored and reported on.

5.3. Security

5.3.1. Intelligence

(a) Synopsis

KWS' Intelligence Unit is apparently broken down and very weak; and operating in out-dated methods of gathering, collating, analyzing and disseminating information. This has rendered the Unit ineffective and unable to effectively cope with emerging challenges. The unit is not proactive in preventing poaching and related wildlife crimes. The Task Force noted the following:

- The Intelligence Unit was reporting to the Director General instead of the Head of security. This may delay quick responses and interventions by the Security Unit.
- The Head of the Intelligence was in an acting capacity for nearly a year. This affects planning, execution and performance. It can also compromise passion for work.
- Other staff were not deployed appropriately and not adequately trained.
- Field officers were very few, making them virtually ineffective. For instance, in many cases, a cell was made up of just one officer, as opposed to the necessary 4-6 staff.

- Intelligence staffs are easily identifiable, which is against the conventional best practice. They are supposed to operate under cover. Yet they use official branded KWS vehicles, operate openly, and even arrest and prosecute offenders.
- The Intelligence officers are not integrated with other state machineries such as NPS and NIS.
- There is no comprehensive programme for training and improving skills of intelligence officers.
- Field intelligence staff are often driven by non-intelligence drivers thereby increasing risks of leakage of sensitive information.
- KWS has wrong methods of deploying staff to the Intelligence Unit.
- Staffing of the Intelligence Unit is not done competitively.
- Rangers are not informed on their roles/mandates.
- Funds allocation cannot sustain the payment for intelligence collection and operation.
- KWS uses outdate tools and equipment of intelligence collection.
- There is no reward system for appreciating exemplary performance.
- There is lack of analysis and production section.
- There is lack of appropriate intelligence focus.
- There are blurred lines between different security units; it is difficult to tell the lines between intelligence, investigation and operations.
- There is a lack of equipment and modern technology.

(b) Recommendations

158. The reporting structure, right from the field to the top, needs to be streamlined to enable smooth flow of information. For example, intelligence officers report to the Senior Wardens who may not know how to utilize the intelligence information.
159. There is need for closer collaboration with other local and international security agencies.
160. There is also need for cross-border collaboration.
161. Resource allocation should be improved.
162. KWS needs to enhance confidential expenditure for good information.
163. There is need for capacity-building through training and development. This can be done through closer liaison with NIS for restructuring and modernization of intelligence arm of KWS.
164. There is need for talent spotting of the right intelligence officers.
165. The intelligence system should be proactive rather than reactive.
166. There is need to introduce a reward system for informers and staff who have performed exemplary well .
167. There is need to establish intelligence analysis and production section of intelligence information (data base custodians).

168. KWS must find ways to promote and ensure confidentiality and integrity of intelligence information.
169. KWS needs to develop SOP with scope of work and job descriptions for intelligence staff Systems and procedures.
170. There is need to unify the Rhino Unit.
171. KWS needs to balance the training drills with emphasis on bush-craft in order to improve ranger effectiveness, etc.
172. KWS needs to acquire concealed intelligence collection devices such as cameras, voice recording gadgets, etc.
173. KWS needs a private office away from HQ to manage intelligence issues.
174. There is need to establish a data bank of poachers, suspects, and ex-KWs personnel, etc, and to enhance profiling of suspicious characters.
175. KWS need to engage more proactively in following up court cases and prosecutions.
176. There is need for a liaison office to engage with regional and international security institutions on wildlife security.
177. There is need to consider setting up an academy of excellence on wildlife security.

5.3.2. Investigations

(a) Synopsis

One of the core functions of KWS is protection of flora and fauna. During the public hearings the task force observed that cases of poaching and trade in wild life products were alive in the country. Cases of wildlife products were seized at JKIA, Kilindini Port and along major highways .Some of these cases have been finalized or are still pending before various courts.

In some presentations, the task force was informed that some accused persons taken to courts had been released for lack of evidence, poor investigation of cases or due to other unclear circumstances. Some cases have also taken too long to conclude due to interests and complicity of personnel from enforcement agencies.

It also came out that KWS Investigations wing does not have capacity to address emerging challenges. The wing is poorly equipped with human capital and lacks current technology to enable them process scenes of crime, analyze exhibits /take custody. Mishandling of exhibits, interference with evidence lead to acquitting of suspects.

It is therefore important for KWS to strengthen its Investigations wing with enough; well trained personnel who can make a good follow up of cases pending before court. The task force noted the following challenges;

- KWS relies on external bodies for forensic analysis and morphology of wildlife trophies; National Museums of Kenya; Government chemist; Scenes of crime police officers. This leads to delays in getting results.
- Lack of continuous Collaboration with other local and international security agencies.

- Poor resource allocation.
- Forensic laboratory not operational and lack of modern technology in detecting wildlife products for effective and efficient prosecution of those in possession.
- No reward system.
- Blurred reporting lines – difficult to draw a line between intelligence, investigation and operations personnel.
- Lack of capacity to prosecute wildlife crimes and insufficient prosecutors.
- Lack of thorough investigations that sometimes result into acquittals or lenient sentences.
- Mis-declaration of goods and forged documentation and use of briefcase companies making it difficult to trace the dealer of the trophies.
- Challenges in confidentiality and integrity.
- Challenges of dealing with cases where information indicates use of agencies, brokers and middlemen to transport and export the trophies.
- Use of top of the range/ diplomatic vehicles to enter protected areas which are rarely stopped at roadblocks or park entrance security control.
- Sending trophies and live animals through courier services.
- Internal theft and sale of trophies, exhibits from KWS stores and armories by staff and other law enforcement officers. Poor handling of crime scenes by field officers leading to tampering and even loss of crucial evidence.
- KWS investigators are limited in finances and jurisdiction from carrying out law enforcement duties across Kenya's borders. The investigations therefore terminate within Kenya's borders.
- Dynamic methods for concealing trophies e.g. fresh produce, processed wildlife products.
- Use of chili pepper and tobacco to ward off sniffer dogs.
- Customs and KPA agents to do not strictly adhere to export procedures and processes, thereby leaving loopholes that can be taken advantage of by corrupt officials.
- Corruption and tendency to give more attention to Import cargo than export cargo thereby creating a loophole of wildlife products exiting for overseas market destinations.
- No centralized or structured storage/ custody of seized wildlife trophies.
- Lack of adequate investigations skills.
- Mixing of genuine and bush meat as deception plan.
- More and more women are being arrested in trophy dealing.
- Criminal profiling is becoming more challenging as different communities are now involved in poaching and dealing.



Photo 9/10: Modern hand held automated detector that can be configured to detect wildlife products

(b) Recommendations

178. Need to establish forensic Laboratory at the headquarters with mobile units deployed at main entry/exit points.
179. Establish professional scene of crime processing and proper chain of custody of exhibits linked to wildlife crimes. Professionalize investigation operational practices through capacity building, recruitment ,training and development of investigators.
180. Establish a national wildlife product storage facility to secure exhibits, and other recovered products.
181. Immediate secondment of adequate investigations personnel from Directorate of Criminal Investigations.
182. Immediate recruitment and training of investigation personnel.
183. Build capacity of prosecution staff in consultation with DPP.
184. Review and follow up of all pending cases involving trafficking and possession of wildlife products.
185. Sensitize judiciary department on the magnitude of the poaching menace.
186. Lobby judiciary to explore the establishment of wildlife crimes section/division to fast track wildlife related cases.
187. Collaborate with other Government enforcement and security agencies.
188. Need to embrace modern technology in investigation process.
189. Liaise with the economic crimes office at the Directorate of Criminal investigation.
190. Establish a liaison office within KWS to facilitate regional/international cross border information on wildlife crimes.
191. Establish a KWS internal affairs section to handle investigations for internal disciplinary matters and procedures.
192. Liaise with DPP to enhance capacity of prosecutors.
193. Implementation of Wildlife act and sensitization of all stakeholders and security agencies on the same.

194. Government officials who process contraband should be held responsible and face criminal action.
195. Invest in new technology and acquire computerized hand held/ portable electronic detectors configured to detect wildlife products.
196. Use of modern scanners with image analyzing capability. Establish one stop shop for Port scanning.
197. Need to automate the entry and exit gates to the parks.
198. Use of standard meat transportation vehicles to avoid detection.
199. Inventory of wildlife products in armouries, stations, private conservancies, and open a national tally inventory warehouse.
200. Need to establish cross border liaison with the wildlife authorities in the immediate neighboring countries.
201. Proper vetting of clearing agents by the relevant agencies (KRA, State Law office) and establish database of all legitimate clearing agents.

5.3.3. Operations

(a) Synopsis

Deployment: KWS has eight conservation/operational regions (namely Southern, Coast, Tsavo, Eastern, Northern, Mountain, Central Rift and Western) which do not have adequate personnel to undertake operations effectively. This is partly contributed by irregular recruitment of rangers which has impacted negatively in the organizational succession process. Ideally, each region is supposed to have one company of 120 officers. The whole issue of this regional approach and its probable lack of appropriateness is discussed in Section 5.7. However there are other operational problems which are noted as follows:

- The low number of rangers has resulted in overworking, low morale and other welfare issues.
- Inadequate coverage of the respective areas of operation and poor response to issues/incidences of security nature.
- KWS is operating with inferior and some outdated weaponry that do not match with the ones possessed by poachers. See picture below on arms in one of the stations visited by the Task Force at Laikipia.
- Lack of adequate specialized equipment.
- Lack of current technology in surveillance and operational facilities. The Task Force did investigate the potential to use modern radar surveillance and control centres as a key component in providing better security. This approach would greatly help providing night time security as well as taking the pressure off the current patrolling reliance. The Task Force also learnt that the Control centres can be effectively linked.



Photo 11: Rhino unit Ranger's kitchen at Meru Park.



Photo 12: Outdated weaponry



Photo 13: A civilian manning main entrance to Meru National park



Photo 14: the 9.1 team

- Lack of armourers to conduct zeroing, service and maintenance of firearms.
- Lack of protective gear and weather friendly uniform.

(b) Recommendations

202. There is need to ensure that security personnel are deployed strategically (see Sections 5.1 and 5.7). All must undergo enhanced tactical training to be effective in conservation security duties.
203. The structure of the Security Unit should be reviewed and renamed 'Security Operations' unit. This should be headed by a highly trained and experienced uniformed officer. (see Section 5.1 and 5.7).
204. Have recruitment and training of personnel held regularly for the purpose of succession.
205. Undertake immediate fitting of telescopic equipment, laser guided gadgets on the available fire arms pending procurement of modern and suitable firearms.
206. Undergo zeroing of weapons. KWS to recruit and train its own armourers and equipment maintenance personnel, instead of having the current status where they depend on NPS.

207. Provide adequate specialized equipment and Investment in the following modern technology surveillance equipment and protective gear, i.e. Night Vision Goggles (NVG), Specialized binoculars, Thermo cameras and GPS.
208. Provide microchips for surveillance of both animals, personnel and firearms usage.
209. Using specialist advice, install, wherever appropriate, surveillance radars and control centres.
210. Consider use of drones/aero domes.
211. Provide body armour, head gear, combat boots and other weather friendly protective wear, Patten 90 web combat equipment camp beds, sleeping bags, Mosquito nets and appropriate repellants.
212. Entrances to the parks, protected areas, including private conservancy areas should be manned by uniformed staff.
213. Undertake frequent enhanced tactical training.
214. Collaborate with other local and international security agencies
215. Enhance Operational practices.
216. The harmonization of standard operating procedures.
217. Undertake regular operational analysis.
218. Introduce reward system for exemplary performance (outside ordinary HR)
219. Ensure confidentiality and integrity by establishing Ethics & Integrity assurance section.
220. Define scope of work with clear job description to address blurred lines – difficult to tell line between intelligence, park management, Community areas, investigation and operations (see Section 5.1).
221. Enhance presence of KWS uniformed security personnel in all protected, private and community conservancy areas.
222. Establish special rapid response teams for patrols and emergencies responses i.e, the one used at Northern Range Land Trust(9.1 model).
223. Enhance community scouting force. Those recruited to be vetted by KWS in consultation with the National Police Service (NPS), to enable them acquire KPR status. The scouts can be earmarked for other conservation assignments (intelligence informants).
224. Implement Section 16 of the Wildlife Conservation and Management Act in regard to remunerating community scouts.
225. Undertake recruitment of rangers regularly as practiced in other paramilitary establishments, and in this regard, consider the use of fixed term engagements.

Communication

(a) Synopsis

There is urgent need to modernize communication for operational excellence. KWS is operating on old technology systems with a severe shortage of radio operators. The task force noted that non-uniformed staff access and operate radio communication equipment. The following challenges were observed:

- Non uniformed personnel manning radio room.
- Use of old technology communication equipment.
- Unserviceable communication equipment.
- Lack of adequate communication equipment.
- Lack of adequate radio operators.

(b) Recommendations

226. Invest in encrypted modern High and very high frequencies Radio communication equipment (HF/VHF} .
227. Invest in satellite phones for areas with poor network coverage.
228. Develop Command &Control centre at the HQ with sub command control centres linked to the network of parks, protected areas and community conservancy areas.
229. Have uniformed trained radio technicians/operators to man radio rooms for security reasons.

Other Operational issues

In reviewing the operations of KWS, the Task Force feels that certain units are not functioning and should be disbanded.

Problem Animal Management Unit (PAMU)

(a) Synopsis

PAMU was established in 1994 as an elite rapid deployment unit to provide back-up for problem animal management across the country. But the current reality is that the unit is not a back up, because problem animal control capability is no longer an inherent skill in KWS. Therefore the concept of an elite PAMU is self-defeating in that crop and other property damage require prompt and immediate responses wherever it occurs. And should be part of the capability of all staff involved with community work. Indeed, the PAMU team confessed to the inappropriateness of the current strategy.

The Unit has its headquarters in Nanyuki with its own offices, accommodation vehicles and other equipment and appears better endowed in terms of uniform and other gear compared to the other resident game-control rangers. There are two satellite

units in Narok and Voi. The Task Force held a special session with the PAMU team to understand their operations. From the discussion, it was clearly evident that the Operations of PAMU do not fit snugly with the general operations of the host station whose core business should indeed be management of problem animals. This has created disillusionment and despair to the local Warden and his rangers.

A consistent criticism across the country is that KWS does not respond adequately, if at all, to problem animal situations. This causes increasing resentment of KWS by local communities. Yet problem animal control (PAC) should be a mainstream activity as indicated in section 77 of the Wildlife Conservation and Management Act.

(b) Recommendations

230. PAMU to be dissolved and the responsibility for PAC should be mainstreamed in the proposed Community Extension Division (see Section 5.1) Personnel from the PAMU could be deployed as specialist support within the proposed Division.
231. All officers in the proposed Division should be given proper training in PAC duties.

Deployment of Crack Units

(a) Synopsis

The task force noted that the anti-poaching crack unit at Laikipia was located in an isolated location, greatly hindering any collaboration in responding to poaching threats. Furthermore the unit only had two big Lorries that are unsuitable for patrols or rapid response tasks. The fuel supplied was very limited thus further hindering any response to any poaching threat or incident.

Despite the above problems, the KWS NPS combined CRACK unit is an excellent idea for quick response purposes, however, in a restructured and properly staffed KWS.

(b) Recommendations

232. This unit is recommended to form the multi-Agency wildlife rapid enforcement Unit to man Trafficking on roads and routes outside Protected Areas, linking up with KWS, NPS, Central Country administrators down to the grassroots eg., with the local Chiefs.

5.4. Vehicle Support

(a) Synopsis

KWS has inadequate transport with an aging fleet with a serviceability state of below 50%. A significant number of vehicles in the field are old and unserviceable greatly limiting KWS ability to be operational. To emphasise this point the Task Force found



Photo 15: Marsabit motor yard with old grounded vehicles.



Photo 16: Marsabit motor yard with old grounded vehicles.



Photo 17: A patrol car with worn-out tyres at Meru rhino sanctuary.

that in many stations, vehicles are grounded for lack of effective maintenance and have fallen beyond economical repair.

The Task Force believes this problem is caused by the following issues:

- There is no fleet management policy.
- There is no vehicles deployment policy.
- There is a lack of vehicle rationalization procedures e.g. several four-wheel vehicles in the HQ and not in the fields.
- There is no fleet register.
- There is a lack of centrally monitored tracking devices.
- The cost of maintaining the fleet is high.
- There is misuse of vehicle on non-essential duties.
- Several old vehicles, some in distant outstations, have not been disposed of.

(b) Recommendations

233. Undertake a detailed survey of the fleet to quantify the vehicles that need replacing, etc.
234. Urgently develop fleet management and vehicle deployment policies.
235. Explore the feasibility of vehicle leasing e.g. as in the NPS.
236. The process of boarding of old vehicles should be regular and fast-tracked to save on costs.
237. Invest in modern fleet management technology with tracking devices to control misuse or theft.
238. Invest in modern combat vehicles such as armoured personnel carriers, where appropriate.
239. For security reasons all drivers must be uniformed.

5.5. Air Wing

(a) Synopsis

KWS Air wing carries out two distinct categories of air operations, a maintenance operation and support services to KWS activities.

Commercial air operations

The KWS air wing under this category is authorized to carry out commercial air transport operations and holds a valid Air Operator Certificate (AOC) number 225 which remains varied until 30th October, 2014. The fleet consists of two Bell Helicopters and two Cessna fixed wing all of which are in good operating condition.

An audit by the Kenya Civil Aviation Authority (KCAA) in 2014 concluded that the commercial air wing has continued to maintain an acceptable level of safety in all its operations. . The air wing has maintained a credible safety record since its issuance with

an AOC, with no single incident/accident reported involving any air craft under this category of operations. The audit further conclude that the KWS air wing management structure remains adequate with qualified personnel who ensure the safe and efficient running of the commercial component of the organization.

Private air operations

The air wing under this category is involved with wildlife management support that includes security patrols, translocations, search and rescue, animal census and veterinary service support. The aircraft in this category include one (1) Cessna 180, one (1) SUPERCUB, and two HUSKYS which are all confirmed to be in airworthy condition. Two other HUSKYS were involved in accidents.

The pilots in this category are rangers and wardens who are selected internally and trained to become pilots. A Private Pilot License is adequate to fly aircraft under the private category of operations provided that the pilot is current on the aircraft type.

In the recent past, KWS has reported three major accidents involving aircraft under this private category. This involved a Husky (5YKWL) in Kamboyo (Tsavo West National Park) on 05/03/2014, a Husky (5Y-KWD) in Nanyuki on 16/02/2014 and a Super Decathlon (5Y-KWP) in Maktau-Amboseli on 27/07/2013. Most of these accidents involved training flights. The Aircraft Accidents investigations Department in the Ministry of Transport is carrying out full investigations to determine the possible causes of these accidents.

Aircraft Maintenance Department (AMO)

KWS AMO is based at Wilson Airport is approved by KCAA. The certificate is varied until March 2015. The audit noted that most of the incidents/accidents were not maintenance related. A previous audit had noted that the technical personnel recruitment, initial training, approvals and continuous training programme as reviewed in the certifying staff records were found to be satisfactory with KCAA requirements. However, the number of certifying engineers was found inadequate to the fleet that KWS maintains.

Support provide to KWS activities

There is inadequate aircraft to provide the management support described above. The current fleet cover in the areas of operations is one plane serving Amboseli and Lamu, while what is ideal is one plane for Lamu, two for Tsavo East and Tsavo West, one for Marsabit, and one for Aberdares and Mt Kenya.

Some of the aircraft have limited flying duration capability, e.g. 3 hours. Once the aircraft have left the Air Wing and are out-stationed, there is no monitoring of the use of the aircraft. The Task Force was informed that sometimes the aircraft are used for delivering letters – hardly a wildlife management support task. The current fleet is not economical in use of fuel. So for example, using the current helicopters in driving

out livestock from parks is effective but very expensive. The acquisition and use of microlites for this purpose would be preferable.

There are too few pilots, thus restricting the ability to use the aircraft. It is not efficient to have aircraft sitting on the ground and ideally there should be two pilots per plane. But the recruitment of pilots is contentious, as great pressure is brought to have certain favoured individuals selected. Furthermore no supplementary training is available to build competence and confidence in bush flying.

(b) Recommendations

240. The air wing support needs for KWS should be reassessed in order to bring up to date, the adequacy or inadequacy of the current situation in a quantifiable manner.
241. An aircraft management policy should then be put in place and monitored. This policy should address size of the fleet, the replacement process, the charter aspect versus KWS core business, the undertaking of commercial maintenance versus focusing on KWS aircraft and funding needs.
242. The above process should also have regard to the procedures as laid out in the Approved Maintenance Organization (AMO), the Maintenance Procedures Manual (MPM) and any other policy document. KWS should also develop standard operating procedures that promote safety in its pilot training.
243. All KWS aircraft should be fitted with tracking devices, so that their movements can be monitored and should also be fitted with surveillance equipment to help with wildlife management needs.
244. Potential pilot trainees should be selected based on an established minimum criteria that takes into account the trainee's academic qualifications as well as capability to ably pursue flight training.
245. The Airwing should employ a licensed trainer who can build up pilot skills and experience in bush conditions.
246. Ministry of Transport Accident Investigations Department should release the results of the three recent accidents in order to ensure the findings are integrated into safety requirements.

5.6. Plant and Equipment

(a) Synopsis

Well maintained roads, bridges and airstrips in the protected areas is critical for efficient implementation of security operations. KWS has a number of graders, rollers, lorries and associated heavy road construction machinery and equipment used for maintaining the network of roads, bridges and airstrips under its jurisdiction.. However for the last ten or so years, the bulk of KWS's routine maintenance and rehabilitation

of roads has been undertaken through contracted services. This has therefore meant that the heavy plant, vehicles and other road maintenance equipment (including staff who operate them) remain idle for long periods. The practice of contracted services has been occasioned by the fact that most of the road maintenance funds is derived from the Kenya Roads Board who favour the use of contracted services for ease of accountability. The policy and practice of road maintenance in the protected areas therefore needs to be reviewed in order to have a more coherent and cost effective policy for road maintenance in the protected areas.

(b) Recommendations

- 247. Prepare a maintenance policy for all roads, airstrips and bridges maintained by KWS
- 248. Review the adequacy, effectiveness and efficiency of the current road maintenance arrangements
- 249. Undertake an audit of all road maintenance equipment

5.7. Regional Versus hotspot Approach

(a) Synopsis

The current deployment of security staff is done on a regional approach. Essentially KWS has divided Kenya into 8 Conservation Areas. In each Conservation Area there is deployed 1 company consisting of 3 platoons. But take the example of C Company based on the task Force's visit to Lamu. The three platoons consisted of 20, 15 and 12 rangers respectively. Yet standard platoon strength is 36. This situation is worsened by the fact that each platoon had only 1 serviceable vehicle. The C Company issues were replicated in the other Conservation Areas and it was a constant refrain from the Regional ADs that they and their personnel are spread too thinly on the ground, have little or no mobility and were unclear on their roles and responsibilities allied to very blurred reporting lines.

The consequence of this is a disconnect which severely restricts the KWS ability to respond to where threats are or will be occurring. In other words this thin spread of personnel across the whole of Kenya ignores the distribution and concentrations of wildlife, and leaves species such as elephants, lions, Grevy Zebras, Hirola and Plains Animals more vulnerable to poaching. A good example of this is provided by Rumuruti Forest, where approximately 300 elephants occur on a seasonal basis but have no security cover when they are there. In his presentation to the Task Force, the Deputy Director, Security also highlighted the inability of security personnel to respond, based on the above approach.

Secondly, this regional approach seems out of date in regard to now being inconsistent with the evolution of the two tiered Government system, based on 47 Counties. It is

at the County level that collaboration with other security and conservation agencies will occur. Furthermore the 2013 Wildlife Conservation and Management Act has the introduction of County Wildlife Conservation and Compensation Committees.

The question that stands out then is why has this situation been allowed to continue until now? This regional approach therefore urgently needs reassessing and forms the basis of the Task Force's recommendations in regard to this challenge.

(b) Recommendations

250. Urgently review the KWS regional conservation approach and harmonize it with the devolved governance structure and the protected areas networks, taking into account where possible the ecosystem approach.
251. If resources limit the implementation of the new suggested approach, then prioritize those protected areas and counties where threatened species are concentrated, keeping in mind seasonal movement.

5.8. Board of Trustees

(a) Synopsis

The Board of Trustees (BoT) is responsible for overseeing the management effectiveness of KWS through the provision of operational policy guidelines, followed by the monitoring of the policies implementation by KWS staff. Apart from overseeing the KWS functions set out in the 2013 Wildlife Conservation and Management Act, such policies include overseeing Human Resource management (including staffing, recruitment and promotions), transport and fleet management, etc... The BoT in exercise of its duties is expected to uphold high standards of professionalism. During the field visits, staff in various stations were of the view that the BoT was partisan especially on matters relating to recruitment and promotions. There was a general perception that the BoT was also violating its own policies and guidelines especially in dealing with human resource issues. In some instances, the BoT was accused of micro-managing KWS and that the divisions in the BoT were visible and that the BoT were pulling in different directions. The result was that the recent Board had lost sight of its role and this has contributed to the loss of quality in the service provided by KWS. The result was that the board lost sight of its role and this has contributed to the loss of quality in the service expected of KWS.

Section 8 of the Wildlife Conservation and Management Act provides for the new composition of the Board and their method of appointment. Section 9 sets out the Boards functions. But for the moment there is no Board in place, but this needs addressing urgently to assist in reviving the quality of KWS in achieving its mission and to steer the reforms being recommended in this report. But it is crucial that the members are experienced, are professionally qualified, and are committed to having KWS stick to its

core business and remains neutral and objective. It is also worth investigating whether the boards operational procedures (e.g the committee system) lend themselves to good governance and management practise.

One specific function of the Board is to recommend to the Cabinet Secretary the appointment of suitable persons as Honorary Game Wardens (section 12(5)). There seems to be little clarity on what suitable actually means and the history suggests that the persons appointed have varied considerably in their ability and integrity. There seems to be a need to develop clear terms of reference, to adopt clear criteria for consideration of such persons and to have an annual report provided by such officers on the activities they have undertaken, with the implication that such officers should be appointed/confirmed annually.

(b) Recommendations

252. Appoint a new Board, using criteria that will as much as possible meet the needs outlined above.

5.9. Impending Merger of Conservation State Corporations

(a) Synopsis

When visiting such sites as Mount Kenya and the Aberdares, where both KWS and KFS are present working alongside each other, the Task Force got to learn that the reality is that there is little or no collaboration between the two Services. Indeed KWS tended to think KFS was weak in regard to allowing grazing, firewood collection, etc. in the forest reserves and KFS certainly never assisted in co-operating on wildlife protection, for example. The merger however does have the potential to bring about real benefits. KFS has a staff of 6,000 while KWS has 4,000 and the merger may help address the security personnel staff challenges. However there would be need for harmonized training/operations. KFS probably has a better community experience record and personnel. The merger provides an opportunity to bring about co-operation and integration.

However the Task Force was informed that the internal report is recommending the creation of four main divisions, namely Forest, Wildlife, Enterprises and Corporate. It is the Task Force's strong view that this approach will hinder integration and strongly urges that the structure recommended under Section 5.1 be retained under the merger. This would allow Mount Kenya, for example, to be managed as one protected area under one division (Conservation and Management) with a single point of command and with one reporting line.

The selection of a division for Enterprises has presumably been influenced by KFS technically being responsible for commercial forest production. However KFS has not had the skills to manage commercial forestry since the nineties. Given that the merger will bring about a larger organization with the need for greater management skills, it

would make sense to stick to a policy of using a private sector concession for managing the plantations, provided this was done in a transparent, open and competitive manner. It would then need one specialized unit within the merged service to handle these concessions.

The review of KWS undertaken by the Task Force, also shows that a corporate division can take over the decision responsibilities of the Director General, which has led to some commercial decisions being taken recently that, undermine the core business of the Service. Corporate services are essentially support services and should not be allowed to assume mainstream powers.

(b) Recommendations

253. Under the merger, implement the organisational structure recommended in Section 5.1.
254. Use the Private Sector to undertake commercial tree plantation management under a transparent and open concession process.

6. COMMUNITY CONSERVATION

(a) Synopsis

A significant percentage of Kenya's wildlife is found outside the network of formal protected areas and thus occurs on community and to a lesser extent on private land, except in Laikipia County. The pressure on wildlife both inside protected areas and outside has been described in Part A of this report. As recognized by the Constitution and by the Wildlife Conservation and Management Act, the custodianship of wildlife must now be assisted by community and private conservancies, if the current siege and consequent decline in our wildlife resources is to be arrested.

This assistance by the communities is not going to happen by itself and it will require a good understanding of the challenges and needs to make Community participation in wildlife management a success story. That it can be a real success story is provided by good evidence in countries like Namibia and Nepal, but credit should also go to Kenya initiatives such as the Northern Rangelands Trust. This section will therefore go into some depth on the challenges to be met and then conclude with a set of recommendations. But first the challenges:

Weak relationships between communities and KWS

o Slow response to PAC

Human-wildlife conflicts continue to be experienced and the slow phase at which KWS response to such matters continues to be of concern to communities. Failure to respond to human-wildlife conflict leads to retaliation where communities kill wildlife. Whilst KWS remains responsible for PAC, the burden can be lightened by training community scouts on problem animal control techniques and simple measures to prevent such conflicts.

o Weak community liaisons and extensions

A good relationship between KWS and communities is paramount in securing the future of Kenya's wildlife and this can be enhanced through a structured community liaison and extension service.

Community liaison and extension should be well resourced for effective community awareness. There is need for KWS develop an extension programme applicable across the Country.

The KWS has a very low engagement mechanism with the local communities involved in wildlife conservation. There is need for KWS to have well trained personnel on community public relations that opens doors for both KWS and communities to share issues and solutions in wildlife conservation.

- o Weak and misdirected CSR projects

The CSR projects undertaken by KWS are meant to give incentives for encouraging good wildlife conservation. The current KWS CSR is underfunded and is not well thought through. CSR projects should bring benefits to people derived wildlife resource management. CSR projects therefore need to focus on wildlife areas and areas of wildlife importance in order to leverage for good wildlife conservation.

Communities feel that the current KWS CSR projects are top down and doesn't address community own felt needs.

- o Militant approach by KWS to communities

In order to secure wildlife in community and private land, Kenya Wildlife Service should be seen as an enabling organization whose role is to facilitate wildlife conservation and management in those areas.

This will require a cultural change in KWS with a clear recognition that officers involved in community work are not involved in enforcement work. KWS will need to use a friendly approach as opposed to militant approach so as to build that cordial relationship with the local communities and private land owners. KWS should tap on community and private land owner's good will to host wildlife in their land by building trust and confidence with the land owners.

This is critical as communities don't feel confident enough dealing with KWS as they fear incrimination, particularly when they act as messengers regarding poaching incidents, etc. KWS should therefore adopt an equal-partner approach when dealing with communities on matters of wildlife conservation.

The government through KWS should also support the national umbrella body of community and private conservancies namely Kenya Wildlife Conservancies Association (KWCA) to build the capacity of the conservancies through good governance and best practices.

Inadequate incentives for wildlife conservation

- o Compensation

Compensation is provided for in the Wildlife and Conservation Act and it is to be implemented through the County Wildlife Conservation and Compensation Committees.

Though the new Act provides reasonable compensation to victims of wildlife, there is fear that with the devolved system of government is not moving fast enough to put in place institutions and authorities at the county level to deal specifically with these issues. This will result in delays in consideration of the claims, and eventual payment of claims which further disenfranchises the community members who were initially enthusiastic about wildlife conservation.

Previous compensations were faced by challenges of lack of funding. There is therefore need to ensure adequate funds for compensation in order to avoid delays in compensation.

- o Partnership arrangements for ‘forgotten’ protected areas

There are certain national protected areas that have been neglected by the government and KWS usually due to inadequate resource t. Under this vacuum, the areas have become run-down, experience encroachment and face poaching pressures In order to secure such areas there is need for KWS to partner with the local communities through the establishment of community wildlife conservancies to provide the management and protection required.

- o Investment opportunities

Currently there are no incentives for tourism investment in the communal areas mainly because of land tenure issues, poor infrastructure, insecurity and lack of support for good governance of wildlife areas especially in the marginalized pastoralist communities.

As part of the requirement to foster incentives and benefits being enjoyed for undertaking wildlife management, the government through KWS should encourage tourism investment into community conservancies in order to further generate revenue to support wildlife conservation.

Low awareness on matters of wildlife

- o Poaching and bush meat

A well-coordinated awareness campaign in order to assist in reducing illegal poaching of wildlife for trophies and bush meat is lacking, which is posing a serious threat to the already dwindling wildlife population across the Country.

The awareness campaign must resonate with the socio-cultural values of different communities living side by side with wildlife in order to encourage peaceful coexistence and understand the potential to realize the underlying benefits in terms of tourism revenues and employment opportunities. This would also help winning communities support and backing to reducing poaching and bush meat in the Country.

- o Lack of wildlife ambassadors on the ground

Grass root leadership on matters of wildlife conservation is lacking. There is lack of goodwill ambassadors drawn from members of the local communities living with wildlife who can effectively articulate issues of wildlife conservation and encourage communities to benefit from assisting the management of wildlife in their areas.

Community capacity to conserve and manage wildlife outside formal protected areas:

o Building capacity of community rangers

Community conservancies are reputable institutions that strive to conserve and manage wildlife in the communal lands. Community conservancies recruit rangers from the local community who assist in providing wildlife security.

The community rangers are often not well trained because community conservancies do not have reliable funding to support such costly rangers training. In the recent years KWS have subsidized the cost of training community scouts at Manyani Field School however many community rangers remain untrained because the community cannot afford to pay even the subsidized training costs. Training of community conservancy rangers will go a long way in improving wildlife security in the important wildlife areas that exist outside of the formal protected area network. The government through KWS should invest in training community rangers because it impacts positively towards wildlife security.

o Lack of rangers' equipment

Community conservancies are struggling to equip their community rangers and it's proving to be a challenge with most of them going without uniforms and other crucial rangers equipment's for effective operation. The community rangers are a whole workforce that KWS can tap to improve wildlife security. The government through KWS however needs to assist in providing effective operational community scouts.

o Lack of income

The community conservancies are having challenges paying salaries for their rangers who work round the clock to provide security to our wildlife. The donor funding is ad hoc and majority of them have not invested in tourism to support their operations. There is urgent need for the government through KWS to subsidize the operation costs of such community conservancies and in particular by contributing to community rangers salaries and withdrawing fiscal disincentives, such as VAT. The community rangers play the exact role that KWS rangers play in providing wildlife security.

o Failure to strengthen intelligence

Intelligence is important in preventing poaching and in ensuring successful wildlife recovery. Community conservancies are entrenched into the local communities and are key to making intelligence contributions which can greatly assist in the overcoming of wildlife security threats. Therefore the government through KWS should engage Community Conservancy leadership in gathering

intelligence information on all matters of wildlife crime and security by making use of existing conservancy structures.

o Lack of KPR status

In the recent years the rate of poaching has been higher outside protected areas and this could partly be attributed to the fact that majority of Community Conservancy rangers do not have KPR status to be able to fight with poachers. Several community rangers have been killed in the line of work by poachers who often have sophisticated weapons. The government through KWS and Kenya police should ensure that all Community Conservancy rangers who are armed are considered as KPR or may be known as Wildlife Protection Reservists. The idea of establishing a restructured Honorary Wardens category and Wildlife Protection Reservists who report to KWS security should be explored further.

o Weak wildlife monitoring in communities

It's never enough to provide wildlife security without investing in wildlife monitoring in order to monitor trends over time. The government through KWS should invest in training community conservancy rangers in wildlife monitoring outside of protected areas. Wildlife monitoring data will inform conservancy decisions on matters of management within their conservancies, on protecting wildlife corridors, on avoiding conflict and providing trend data.

Lack of community conservancies in key wildlife areas

Space for wildlife is increasingly diminishing due to land conversion, land subdivisions, loss of wildlife habitats. The future of wildlife outside protected areas is in the establishment of community conservancies in all key wildlife dispersal areas. This strategy should be built on identifying key wildlife dispersal areas lacking conservancies and move with speed to partner with the local communities to establish conservancies in those prime areas in order to secure the future of wildlife in those dispersal areas.

Loss of wildlife habitat in the community areas

o Communities to be supported to do range rehabilitation

Degradation of grazing habitats is forcing pastoralists to move their livestock into land traditionally occupied and enjoyed by wildlife. It is therefore becoming increasingly important to focus on improving the rangelands to benefit livestock and wildlife and change a growing conflict situation into a win-win situation.

The government through KWS and relevant ministries should come up with measures and best practices to reverse grazing degradation and in effect support wildlife conservation and management. Rangeland rehabilitation can help

reduce pressure on the protected areas as evidenced by the experience of the Northern rangelands Trust.

Land tenure

Stable land tenure is important to management of wildlife and in particular the community land bill. In parts of the country there exists a confused land tenure limiting investment and decisions on wildlife conservation and management. A county such as Lamu demonstrates the urgent need to address this problem. In some Counties such as Isiolo, there exists public land such as LMD (Livestock Marketing Division) and KDF which sit on critical wildlife corridors and dispersal areas. Being public land the NLC should consider giving priority to wildlife and involving community partnerships where Government resources are lacking.

(b) Recommendations

255. The government through KWS and Police to ensure that Conservancy rangers acquire KPR status to enable them provide wildlife security in the community areas.
256. Where applicable Conservancies should be established to buffer protected areas from encroachment.
257. The government through KWS should subsidize the cost of running community conservancy by taking up the payment of conservancy rangers.
258. The government through KWS should strive to support the provision of conservancy ranger's equipment's for effective security operations.
259. The government through KWS to undertake to build the capacity of conservancy rangers through cost effective training at Manyani Training College.
260. KWS to ensure quick response to human-wildlife conflict in order to avoid retaliatory killing, as recommended under Section 5.1.
261. The government through KWS to facilitate establishment of community conservancies in all key wildlife dispersal areas in effort to secure the future of wildlife.
262. Conservancy rangers to be trained on strong wildlife monitoring skills for effective tracking of wildlife trends in communal areas in order to inform management decisions necessary for ensuring the future of wildlife in the those areas.
263. KWS to tap on conservancy institutions to gather intelligence information on wildlife crimes and wildlife threats in the communal areas.
264. KWS to partner with conservancies in the initiation of Community Wildlife Ambassadors program to champion matters of wildlife at the grass roots.
265. The government through KWS to create incentives to attract tourism investment into community conservancies in effort to generate revenues to support wildlife conservation.

266. Urgently implement the Wildlife Conservation and Management Act and ensure timely and consistent compensation arising from human-wildlife conflict so as not to lose community good will to host wildlife in their own land.
267. The government through KWS should allocate adequate resources for effective CSR projects which should benefit wildlife conservation and management.
268. On matters of wildlife KWS should be seen to be an enabling institution empowering communities and private land owners to conserve and manage wildlife. The idea of Honorary Wardens, Wildlife Protection Reservists.
269. Government through KWS to support the national umbrella body of community and private conservancies namely Kenya Wildlife Conservancies Association (KWCA) to develop standards and best practices for community and private conservancies aimed at strengthening wildlife conservation outside formal protected areas.

7. INTER-AGENCY COLLABORATION

(a) Synopsis

Inter-agency collaboration on wildlife security is a must. KWS is now a member of the National Security Advisory Council (NSAC) and this is an important step forward. Section 2.3 highlights the need for much better collaboration at JIKIA and Mombasa Port. KWS is now included on many County Security Committees, but this collaboration will work better if KWS re-organizes on a County deployment basis rather than the current regional deployment basis (see Section 5.7). Under this umbrella, close partnerships should be formed with NIS, KPA and KRA in order to deal with the entire system of wildlife crime as detailed in the various components of Sections 2.1, 5.3.1 and 5.3.2. Obviously collaboration with community leaders, trusted Chiefs, community conservancies, private conservancies and KWCA in regard to intelligence sharing and providing protection is also important. The challenge lies in KWS respecting this need and working towards achieving it. Paying lip service will not suffice and proper modus operandi must be worked on to make the collaboration effective.

The second area of important collaboration is with the NLC and other key agencies in the planning sector. These include The Directors of Surveys, Commissioner of Lands, Director of Physical Planning, the Director of Adjudication and Physical Planning, Director of Housing and Urban Development, The Kenya National Highway Authority (KENHA) and their respective professional bodies in APSEA - Engineers(ERB/IEB), Architects(AAK), Surveyors (ISK), Kenya Institute of Planners (KIP), Kenya Electricity Transmission Company (KETRACO). For this collaboration to be effective, KWS needs to improve its planning capability and skills and the Government must encourage and support KWS presenting a wildlife perspective , irrespective of whether the proposed development is a government initiative or not. After all promoting tourism based on the security of our wildlife resources is also a key Vision 2030 target.

The Land Act 2011 (section 11) also gives the NLC the authority to take appropriate action to maintain public land that has endangered or endemic species of flora and fauna, critical habitats or protected areas, as well as identifying ecologically sensitive areas that are within public lands and demarcate or take any other justified action on those areas and act to prevent environmental degradation and climate change. These are strategies that can be strengthened by an active collaboration between the NLC and the KWS towards protecting these ecologically sensitive areas as well as the endangered species of fauna and flora.

The Physical Planning Act CAP 286 (section 16) gives authority to the Director of Physical Planning to control development on land including that related to wildlife use, which would again benefit from active collaboration.

The Survey Act CAP 299 (section 24) gives the surveyor the sole mandate of erecting

or placing trigonometrical station, fundamental benchmark or boundary beacon for the purpose of defining the boundaries of any holding or land. This makes the Director of Survey and the Institute of Surveyors of Kenya important institutions to be included in the decision making process that involves land mapping and boundary marking towards delineating the extents of these wildlife ecosystems and other land uses within their environs.

The Land Adjudication Act CAP 284 (section 9) also gives the adjudication officer power to hear and determine any petition respecting any act done, omission made or decision given by a survey officer, demarcation officer or recording officer. This makes their role critical in the areas around wildlife protection areas that are prone to human-wildlife conflicts.

The Kenya Roads Act, 2007 establishes the Kenya National Highways Authority which has the mandate of constructing, upgrading, rehabilitating and maintaining roads under its control. However, most of these roads traverse wildlife protection and dispersal areas thus destabilizing such ecosystems e.g. in causing wildlife traffic accidents along major highways among others. Collaboration between KWS and KENHA is not, in the view of the Task Force, adequate but it should be developed to ensure that such threats are adequately mitigated

The third area of collaboration is between KWS, NEMA and Civil Society to ensure that wildlife values are properly considered under Strategic Environment Assessments (SEAs) and Environmental Impact Assessments (EIAs), including undertaking proper public consultation. This partnership is also important in helping the production and gazetting of protected area management plans

(b) Recommendations

270. Given that the collaboration identified above is considered important, but given that much of it is not in place, the Cabinet Secretary should appoint a small team in each area of collaboration to develop the modus operandi for making it happen and work.
271. As a starting point, KWS should have an arrangement with the police for the secondment of liaison officer, outlining the reporting structures of such a liaison officer and who must have a linkage with all the security agencies.

8. VAT IMPOSITION

(a) Situation, assessment, challenges

The recent imposition of VAT on entry fees to the National Parks has overpriced them. For example a visitor to a National Park in Tanzania pays \$55 per day whereas a visitor to a Kenya National Park now pays \$90 per day. Comparison of visitor numbers for 2012, 2013 and the current part of 2014 clearly shows a decline with reduced park revenues. This decline works against the objectives of Vision 2030, which sees Tourism as a pillar of economic growth.

This reduced revenue stream has a serious budgetary implication as it means that to maintain current levels of expenditure, KWS has to obtain a bigger percentage of funds from the Treasury (the current deficit is over Ksh 1 billion). Again this is supported by a comparison of income sources over the last two years. The consequence is that there is a real risk that there are less funds to support wildlife and habitat security efforts at a time when Kenya is facing an increase in such threats.

The Task Force therefore agrees with the KWS analysis in their Tourism Recovery paper that the VAT levy on Park entry fees has had the following consequences:

- Loss of price competitive advantage of Kenya as a tourist destination
- Decline in tourist visitation
- Loss of jobs in the tourist industry
- Decline of KWS revenue, hence adversely affecting conservation

The imposition of VAT on the wildlife sector also has an impact on the sustainability of community wildlife conservancies. To secure Kenya's wildlife, there is an urgent need to engage and have community support, particularly as 60% of our wildlife spends a significant part of their lives on community and private land. The economics of sustaining the conservancies is fragile, particularly when they are starting up. The imposition of VAT is undermining the efforts to engage communities and private owners in wildlife conservation and management and is working as a disincentive at a time we need to have as many incentives as possible.

The challenge therefore is to prevent fiscal arrangements undermining the development goals of Vision 2030.

(b) Recommendations

272. The Cabinet Secretary for Environment, Water and Natural Resources to initiate discussions with the Cabinet Secretary for the Treasury with the goal of removing VAT from being levied on the Wildlife sector.

9. LAND USE PLANNING

(a) Synopsis

The lack of effective land use planning repeatedly came up as a security threat to wildlife and the habitat both in presentations made by a wide variety of stakeholders and in discussions undertaken during the field visits made by the Taskforce. This concern is supported by the Constitution and the National Land Policy which both emphasize the need to have land use planning implemented in Kenya at the national and county levels.

The Constitution and the National Land Policy make the National Land Commission (NLC) the lead agency in implementing this. But it would be remiss if there was no acknowledgement that the Ministry responsible for Physical Planning has been in the process of preparing a National Spatial Plan for the last five years or more. It is also important to recognize the potential of the Physical Planning Act, Chapter 286 in controlling development, for instance, as has been done in regard to the proposed Konza Technical City. This could be used to curb urban sprawl, unplanned settlements, ever increasing land subdivisions and other encroachments that threaten wildlife corridors, dispersal areas and other areas of wildlife importance.

To assist this land use planning process and need, strong public/stakeholder awareness on the importance of wildlife and their habitats is critical at all levels. This awareness must be allied to an understanding that wildlife as a legitimate land use will provide for a sustainable economic asset that can be used to improve livelihoods, create wealth, and alleviate poverty.

In connection with the foregoing, communities need to be in the preparation of land use plans, as a matter of essence. The positive side of such land use planning is that:

- Communities come up with strong visions that guide wildlife conservation and ensure long term commitment to agreed upon goals and objectives.
- People own the resultant plans and are able to monitor and evaluate development, leading to a reduction in human-wildlife land use related conflicts.

The Task Force therefore wishes to recommend as follows:

(a) Recommendations

273. The NLC to appoint as a matter of urgency a National Land Use Planning Coordinator who should formalize the Kenya National Land Use Plan building on the spatial plan already being undertaken.
274. In addition, that plan should depict the land tenure plan for community, private and public land.
275. Given the weak recognition of wildlife as a prime and distinct land use type, the

proposed National Land Use Plan should now incorporate areas of high wildlife occurrence, especially those relating to corridors and dispersal areas, which information is available in KWS, and the Department of Resource Surveys and Remote Sensing (DRSRS).

276. In implementing the county land use process, priority should be given to those counties where wildlife has a major presence.

Implementing these recommendations would immediately facilitate protecting the important wildlife areas on public land; furthermore, it would provide the basis for counties to negotiate with communities their agreement for the protection of those important wildlife areas. Implementing this process would have the additional benefit of bringing important information to strategic environmental assessments wherever they are required.

10. MINISTRY SUPPORT

(a) Synopsis

The government has a critical role to play in securing Kenya's wildlife. Its primary role is to provide a vision and policy direction on sustainable management of Kenya's wildlife. Such vision and policy ought to be based on clear analysis and anticipation of trends in the pressures put on national resources due to national and global demands. The basis for doing so is already laid down in the Constitution 2010. Article 10(2)(d) of the Constitution identifies sustainable development as one of the values and principles of governance in Kenya.

Achieving sustainability in the wildlife sector will require a delicate balancing of diverse interests and priorities among different government agencies and other institutions. Key among these are institutions whose functions directly affect land use, those that deal with matters of revenue collection and allocation, those that deal with international engagements and diplomacy and those that focus on economic development, among others. It will behoove the Ministry concerned to act as the vanguard of wildlife security interests where competing decisions are involved. This calls for constant vigilance and evaluation of state of affairs in micro- and macro-economic policy development processes. It is the Task Force's view that this function has not been effectively carried out at the moment, as evidenced by reactive rather than proactive responses to a number of decisions and policies that have negatively impacted wildlife security function in the recent past.

There is additional evidence to support this position. Kenya lacks a national wildlife policy. This is a critical lacuna in the efforts to ensure sustainable management of its wildlife. Further, the myriad issues highlighted concerning the Board of KWS and runaway structural failures are critical pointers of a wanting supervisory and oversight role.

(b) Recommendations

277. The Ministry needs to provide a clear vision and a comprehensive policy for ensuring sustainable management and security of wildlife in Kenya.

278. The Ministry needs to play a strategic role in positively influencing national and international policy decisions that affect sustainable management of Kenya's wildlife.

11. IMPLEMENTING RECOMMENDED CHANGES

(a) Synopsis

It is important to emphasise that the Task Force was not given the mandate or the time to spell out an implementation strategy. As a consequence, it is clear for some recommendations as to who is responsible for implementation, but for many recommendations it is not so clear. There is a need therefore to address this issue. The Task Force therefore would like to suggest that the reform process be assisted, using the following approach.

The Ministry of Environment, Water and Natural Resources should as soon as possible appoint a team under the co-ordination of the Ministry to prepare an implementation strategy. This strategy should work through the recommendations and apportion their implementation responsibility to the relevant and appropriate persons, committees or departments/agencies. Where no obvious implementing responsibility exists, then a purpose made team should be appointed to undertake the reform. The strategy should also apportion the recommendations into immediate, medium and long term categories. The strategy should be accompanied by a budget for transferring the strategy into achievement. In addition, attention should be given to what proposals will be required for funding the reform process and which sources of funding might be interested. One specific concern, if experience is anything to go by, is that the recommendations provided by the Task Force, especially in regard to KWS, will not be likely to get full backing by KWS under present KWS circumstances. Based on this approach, then the Task Force makes the recommendations below in (b).

(b) Recommendations

279. The Ministry to appoint an appropriate implementation strategy team under the co-ordination of the Ministry to develop the strategy and budget as outlined above. In addition, the Task Force makes the following more specific recommendations:
280. CS to request the President to appoint a Chair of the Board of Trustees, who will be committed to assisting the implementation of the recommendations as agreed with the Cabinet Secretary
281. CS to facilitate as soon as possible the appointment of the other Board of Trustees members
282. In accordance with section 11 of WCM Act, CS to appoint a Director General, who will be committed to implementing the reforms as agreed with the Cabinet Secretary
283. Where appropriate, CS to make use of external specialists in assisting the implementation of the reform process
284. Where appropriate, CS to make use of early retirement procedures in restructuring KWS.

PART C: CONCLUSIONS AND RECOMMENDATIONS

12. SUMMARY OF RECOMMENDATIONS

The Task Force in undertaking its work and compiling this report believes that the terms of reference required the outcome to be as comprehensive as possible. This has resulted in a report with some 284 recommendations covering the 9 elements of the terms of reference. The cross referencing of the recommendations to these 9 elements is provided at the end of this section. But the Task Force thought it would be helpful to provide its insight on what should be concentrated on in the first instance as follows:

1. Part A identifies as comprehensively as possible the threats to wildlife and their habitats. But it is the threat posed by commercial poaching and bushmeat poaching that requires immediate attention. The thrust of the report demonstrates that the current ability of KWS to deal with this poaching is significantly wanting. Essentially the KWS regional approach (see Section 5.7) allied to a serious decline in the ability of field staff to respond to poaching problems allied to a fragmentation of responsibilities and confused reporting lines has rendered the Service incapable of delivering a standard of service that used to be enjoyed and delivered. In addition, Bushmeat Poaching is not, in reality, on KWS's radar. All these elements need urgent attention and reform, including the restructuring of KWS as recommended in part B.
2. But restructuring KWS is not enough in itself. There has been an unfortunate decline in some key functions. Intelligence is a key weapon in responding to the poaching challenge. Section 5.3.1 demonstrates how much needs to be done, but the whole of sections 5.3, 5.4 and 5.5 are important in illustrating what is required in terms of KWS security operations if KWS is to regain the quality service, this country has a right to expect. Allied to this is the inability of KWS to respond to problem animal control generally let alone responding in a timely manner. This function needs to be mainstreamed as part of the restructuring of KWS.
3. In addition the work environment in regard to work ethics, in-fighting, remuneration, welfare, promotions, transfers and training are seriously hindering KWS in carrying out its mission and have led to a serious decline in the quality of the Service over the last 5 years. The reforms set out in section 5.2 do need to be addressed without any delay.
4. Part A highlights that wildlife crime consists of a chain of people involved in moving wildlife trophies from the field to the market place. The high prices currently

enjoyed for rhino horn and ivory, has resulted in this chain including organized rings. It is thought to be critical that wildlife crime be recognized as a crime of national and international significance. It is therefore important to have all the security agencies recognize this, to collaborate accordingly and to use appropriate legislation in regard to economic crime, organized crime, etc. as well as the wildlife legislation. It will also be important to improve detection and collaboration at the border posts, on our roads and at JKIA and Mombasa port.

5. The report inevitably pays considerable attention to what is required to be done in Kenya. But the section on dealing with the demand side of the commercial illegal trade should be given a very high priority. If the demand side can be reduced, then this reduces the pressure and therefore the resources required in the effort needed to protect the species under the current considerable threat.
6. The urgent attention being recommended above, does NOT mean that the threats outlined in regard to habitat, especially in regard to protected areas, conservancies, migratory corridors and dispersal areas and the pressure from encroachment and development are not urgent or critical. Addressing these issues will however take more time and will require inter-ministerial and inter-agency collaboration. Underpinning this need is the implementation of land use planning at National level and County level as soon as possible (see Section 9). Indeed for Counties such as Lamu, the need is urgent.
7. Under the threats requiring attention, as outlined in the previous paragraph, the Task Force would like to highlight the need to have the Hell's Gate National Park/ KenGen issues addressed and solved as a matter of immediate need. The recommendations relating to this problem are provided in Section 3.1. An element that emerged in particular in relation to Hell's Gate is the perception that projects and programmes highlighted in Vision 20/30 should not have to undergo meeting the requirements of the Environment Management and Co-ordination Act. But Tourism growth based on our wildlife resources, is also a major feature of Vision 20/30. There is therefore an urgent need to get the new EMCA bill enacted and to get acceptance that the requirements of EMCA are to ensure we get sound development that does not have social and environmental detrimental consequences.
8. The strategy for conserving Kenya's wildlife heritage has been built on a protected area network. However what has gone unrecognized is that many species do not stay in the protected areas and undergo seasonal movement for foraging and breeding purposes. These periods spent outside of the protected areas occur on community land and in some instances private land, e.g. Laikipia. The importance of these areas for the long term viability of our wildlife resources is now being

increasingly realized as they come under pressure from the threats outlined in this report. The 2013 Wildlife Conservation and Management Act has also recognized that the strategy must now incorporate the facilitation of communities and private owners in the management and protection of wildlife. The task Force report goes into some detail in what is required to make this a reality (see section 6). But KWS does not enjoy good community relations, with several unfortunate consequences in terms of hampering security intelligence and operations. It is vital therefore that this issue is addressed full on, including having a division in KWS dealing with Community extension. It is also important for the Ministry to produce the regulations and guidelines in regard to benefit sharing and incentives as required under sections 73 and 76 of the Act.

9. This report highlights that KWS cannot work in isolation and there is a need for much improved collaboration as detailed in section 7. But this collaboration cannot happen without some detailed discussion in setting an effective working *modus operandi*. The report therefore suggests that the Cabinet Secretary appoints a small team as soon as possible in the three areas of collaboration that have been highlighted.
10. To quote directly from the report, the recent imposition of VAT on entry fees to the National Parks has overpriced them. For example a visitor to a National Park in Tanzania pays \$55 per day whereas a visitor to a Kenya National Park now pays \$90 per day. Comparison of visitor numbers for 2012, 2013 and the current part of 2014 clearly shows a decline with reduced park revenues. This decline works against the objectives of Vision 2030, which sees Tourism as a pillar of economic growth. This reduced revenue stream has a serious budgetary implication as it means that to maintain current levels of expenditure, KWS has to obtain a bigger percentage of funds from the Treasury. Again this is supported by a comparison of income sources over the last two years. The consequence is that there is a real risk that there are less funds to support wildlife and habitat security efforts at a time when Kenya is facing an increase in such threats. This fiscal arrangement needs urgent review.

In providing this insight on what needs to be addressed as a priority, The Task Force wishes to emphasize that this does not imply that the other issues and recommendations are not important. But ‘Rome was not built in a day’ and this insight tries to suggest where the reconstruction should start.

Finally, the Task Force thought it would be helpful to cross-reference the recommendations more specifically in regard to the terms of reference as set out in the table on the next page.

Cross-referencing the Report sections and recommendation in relation to the Terms of Reference

Terms of Reference	Relevant Sections and Recommendations
(a) identify and profile the various security threats to wildlife and their habitats;	Part A, all sections, accompanied by recommendations 1 - 130
(b) examine the implementation of security programmes in relation to all protected areas and wildlife areas across the country;	Part A, section 2.1.1, accompanied by recommendations 1 – 9, section 2.2, 2.3 and 2.4, accompanied by recommendations 41 – 68, and Part B, section 5.3, accompanied by recommendations 158 - 232
(c) assess the adequacy and effectiveness of the security arrangements, equipment and facilities vis-a-vis the emerging challenges;	Part A, section 2, accompanied by recommendations 1 – 74
(d) assess the staffing strength of the security personnel deployed to provide intelligence and security for wildlife and the protected areas;	Part B, section 5.3, 5.4 and 5.5 accompanied by recommendations 158 - 246
(e) assess the management and security implications of other agencies present in jointly managed areas;	Part B, section 5.9, accompanied by recommendations 253 - 254
(f) examine the implementation of the anti-poaching intelligence system or procedures and constraints thereof;	Part B, section 5.3.1, accompanied by recommendations 158 - 177
(g) assess the work environment for wildlife management and security personnel including remuneration;	Part A, section 2.1, accompanied by recommendations 6 – 8, Part B, section 5.2, accompanied by recommendations 139 - 157
(h) assess the operational strategies of the Kenya Wildlife Service in relation to community and private sector engagement, public image and conservation approach; and	Part A, section 2.4, accompanied by recommendations 63 – 68, section 3.2, accompanied by recommendations 88 – 94, Part B, sections 6 and 7, accompanied by recommendations 255 - 271
(i) make appropriate recommendations on strategies for the strengthening of the security management of wildlife and their habitats, including systems re-engineering.	Parts A and B, all sections accompanied by all recommendations

Annex 1: Seizures of Trophies at Kenyan Airports, 2011-14

Date	Entry No.	Agent	Brief A/c	Action taken	Remarks
14.9.2011	2011MSA3014503 STC buttons, clothes, belts, threads and bags	Uwezo Enterprises Ltd, Msa	-100% verification Unearthed 5 wooden crates having 32 pieces of ivory	-C53 seizure notice D027755 issued - Case referred to KWS and Kenya Police	-Case awaiting finalization by -Port Police and KWS
6.12.2011	2011NB1848666 STC waste plastics	Calbens Conveyors Ltd	-100% verification FTC confirmed 470 pieces of unworked ivory	-Issued C53 D019699 -Case referred to KWS and Kenya Police	-Case in court vide CID port police -Serious Crime Unit investigating -Container relocated to Manyani under KWS custody
21.12.2011	2011MSA3192876 STC waste plastics	Coast Seabed Freighters	-100% verification FTC 727 pieces of unworked ivory	-Issued C53 D019692 -Case referred to KWS and Port police	-Case in court vide CID port police -Serious Crime Unit investigating -Container at port police as exhibit
2.12.2011	2012MLB95265 STC Teal logs	Dhanush Forwarders	-100% verification FTC 11 pieces of unworked ivory	-Issued C53 027759 -Referred to KWS and Kenya Police	- Case referred to DCIO port police
15.1.2013	FSCU761560/20 STC slate or decorative stones	Threeways Freighters Logistics Ltd	-100% verification FTC 640 pieces of unworked 3.827T ivory	-Issued C53 D027760 -case referred to KWS and Kenya police	- Case in court vide CID port police, suspect arrested. KRA BCO, KPA Export clerk and agent arraigned in court -Serious Crime Unit investigating -Container at port police as exhibit
17.1.2013	On transit from Burundi to Thailand	-	Face masks and bangles, 1.69 kg	-	-
20.1.2013	On transit from Burundi, Tanzania to Indonesia	-	Unworked ivory, 2 tons	-	-
23.3.2013	On transit from DRC to Thailand -Chinese citizen	-	Worked ivory then painted,16.6 kg	-	-
3.4.2013	On transit from Mozambique to Vietnam -2 Chinese and 1 Vietnamese	-	Bangles, pen holders, 1.4kg	-	-
4.4.2013	From Angola to Thailand -Vietnamese	-	Cut worked ivory, bangles, 6.6 kg	-	-
5/4/13	From Mozambique to China -Chinese	-	Bangles, pendants, chopsticks, 0.6 kg	-	-
16/4/13	From Benin to Thailand -Vietnamese	-	Painted bangles 33.6 kg	-	-
12/6/13	From Yaoundé to China -Chinese nationality	-	Pendants, lion head 0.2 kg	-	-
27/6/13	From Botswana to Thailand -2 Chinese Nationals	-	Pendants, bangles, necklaces, bracelets,1 kg	-	-
2.7.2013	PCIU522740 STC sun dried fish maws	Gisenya Freight Logistics Ltd, NBI	-	-case referred to CID Kenya police service and KWS	-Container at port police as exhibit
8.7.2013	PCIU1245250 Ivory tusks from Kenya to Malaysia	Seagate Freighters Ltd, Msa	CSD enforcement Track and Trace CSD, I&ED, Kenya Police, KWS, NIS, Media and KPA STC 240 bags of ground nuts FTC 119pp wrapped unworked ivory	-	-container at port police as exhibit
2.10.2013	MSKU6373218/40 STC 255 bags sesame seeds -From Uganda to Turkey	Supreme Outlets Ltd- Mbsa	Verification done by CSD, I&ED, Kenya Police, KWS, NIS, Media and KPA FTC 253 bags of raw ivory weighing 1986kg and 45 packages of Pangolin weighing 534kg.	Seizure Notice no. 027766 of 9.10.2013 -Case referred to CID, Kenya police service and KWS	Container at Port police as Exhibit
4.10.2013	MSKU6207644/40 STC 255 bags of sesame seeds -From Uganda to Turkey	Supreme Outlets Ltd- Mbsa	Verification done by CSD, I&ED, Kenya Police, KWS, NIS, Media and KPA FTC 250 bags of sesame seeds and 956 pieces of raw ivory weighing 2898.15kg	Seizure notice no. 027767 of 9.10.2013 -Case referred to CID, Kenya police service and KWS	Container at Port police as Exhibit
18.1.2014	-	-	Found 1 piece Raw Elephant ivory	-	Accepted offence, Fined Ksh 20M -I/D to serve 7 years imprisonment by CMS Makadara
20.1.2014	-	-	2 pcs worked ivory	-	Case pending before court (PBC) -Accused jumped bail warrant of arrest
23.1.2014	-	-	3 suitcase, 3 travelling bags containing human medicine	-	Case pending before court -Hearing on 8/4/2014 at CMS Makadara
28.1.2014	-	-	17 pcs worked ivory	-	Accused fined 1M -I/D to serve 5 years imprisonment by CMS Makadara
4.2.2014	-	-	5 pcs worked ivory (2 necklaces, 2 whistles, 1 bangle)	-	Accused fined Ksh 2M -I/D to serve 5 years imprisonment by SPM Hon. Nyongesa
15.2.2014	-	-	6 pcs worked ivory (2 bangles, 2 bead necklaces, 1 cylindrical bar, 1 rectangular block)	-	Case before court -Hearing on 5.3.2014 at CMS Makadara
21.2.2014	-	-	5 pcs worked ivory bangles, 8 pcs pendants, 10 lion claws	-	Case pending before court -Hearing on 5.3.2014 at CMS Makadara

Annex 2: The Convention on Biological Diversity re-Bioprospecting and Biopiracy

The Convention on Biological Diversity (CBD) which came into force in 1993, gives guidelines on how bioprospecting ought to be approached as relates to host country, indigenous communities and prospectors. The CBD has three main goals: conservation of biological diversity (also known as biodiversity); sustainable use of its components; and the fair and equitable sharing of benefits arising from genetic resources. CBD secures rights to control access to genetic resources for the countries in which those resources are located. CBD enables less-developed countries to better benefit from their resources and associated traditional knowledge. Bioprospecting often draws on indigenous knowledge about uses and characteristics of plants and animals. In this way, bioprospecting includes biopiracy, which may be described as the exploitative appropriation of indigenous forms of knowledge by commercial actors in the search for previously unknown compounds in organisms that have never been used either in conventional medicine or valuable profitable ventures.

Biopiracy, is a situation where indigenous knowledge of nature, originating with indigenous peoples, is used by others for profit, without permission from and with little or no compensation or recognition to the indigenous people themselves. This may accordingly be treated as engaging in unethical form of bioprospecting. For example when bioprospectors draw on indigenous knowledge of medicinal plants which is later patented by medical companies without recognizing the fact that the knowledge is not new, or invented by the patenter, and depriving the indigenous community to the rights to commercial exploitation of the technology that they themselves had developed. Biopiracy practices contribute to inequality between developing countries rich in biodiversity, and developed countries have the technology to bioprospect and are hosting companies that engage in 'biopiracy'.

The CBD prescribes that in exploration of for commercial components there should be the sharing, in a fair and equitable way, the results of research and development and the benefits that arise from the commercial and other utilization of genetic resources with the CBD Contracting Party providing such resources including governments and/or local communities that provided the traditional knowledge or biodiversity resources utilized.

Biopirates: Bayer earns \$379m from diabetes drug

Bacteria harvested from Kenya are being used by a global pharmaceutical company to manufacture a multi-million dollar diabetes drug, although the country is not making a shilling from the entire enterprise, a dossier prepared by a respectable American think-tank says.

East African, February 13, 2006 Biopirates: Bayer earns \$379m from diabetes drug
Bacteria harvested from Kenya are being used by a global pharmaceutical company to manufacture a multi-million dollar diabetes drug, although the country is not making a shilling from the entire enterprise, a dossier prepared by a respectable American think-tank says.

Sale of the drug, Glucobay, hit \$379 million in the 12 months to December 31, 2004, making it one of the leading brands in the world. Glucobay, scientifically known as acarbose, is sold by the German pharmaceutical giant Bayer.

According to the report *Out of Africa: Mysteries of Access and Benefit Sharing* - published jointly by the Washington-based Edmonds Institute and the African Centre for Biosafety, in 1995 - five years after Glucobay first hit the European market but one year before it was sold in the lucrative American market, Bayer filed for a patent on a new way to manufacture the drug. The patent was subsequently approved in Europe, America and Australia.

Perusal of the patent application for the new method of manufacturing Glucobay revealed that it involved the use of a bacterium called *Actinoplanes* SE 50, which is found in water masses around Ruiru, near Nairobi.

“In 2001, in an article in the *Journal of Bacteriology*, a group of Bayer scientists and German academics confirmed that SE 50 was being used to manufacture acarbose,” the report by the Institute says. “Although their paper did not mention Kenya, it did say that ‘the oral antidiabetic agent is produced by fermentation of actinomyecete *Actinoplanes* species strain SE 50.’”

Apart from Kenya, the Edmonds report details extraction of natural resources from sub-Saharan Africa that have been commercialised for medicinal or cosmetic purposes, earning their patent holders hundreds of millions of dollars without compensating the communities from where they were extracted, even though the communities had been using them for centuries.

The companies involved read like a roll-call of the top players in the global medicines and cosmetics market, and include GlaxoSmithKline, Merck Sharp & Dohme, Pfizer and French cosmetic giant Dior.

Excerpt from “Out of Africa: Mysteries of Access and Benefit Sharing”, page 11 Diabetes Drug Produced by a Microbe

Many of those who suffer from Type II diabetes can thank a microbe from Kenya’s Lake Ruiru for a drug that improves their lives. Type II diabetics frequently take acarbose, a drug better known by its trade names Precose (in the US and Canada) and Glucobay (in Europe and elsewhere). (3)

The drug is an “alpha glucosidase inhibitor”, meaning that it works by regulating absorption of glucose into the bloodstream, thereby preventing potentially dangerous spikes of glucose (“blood sugar”).

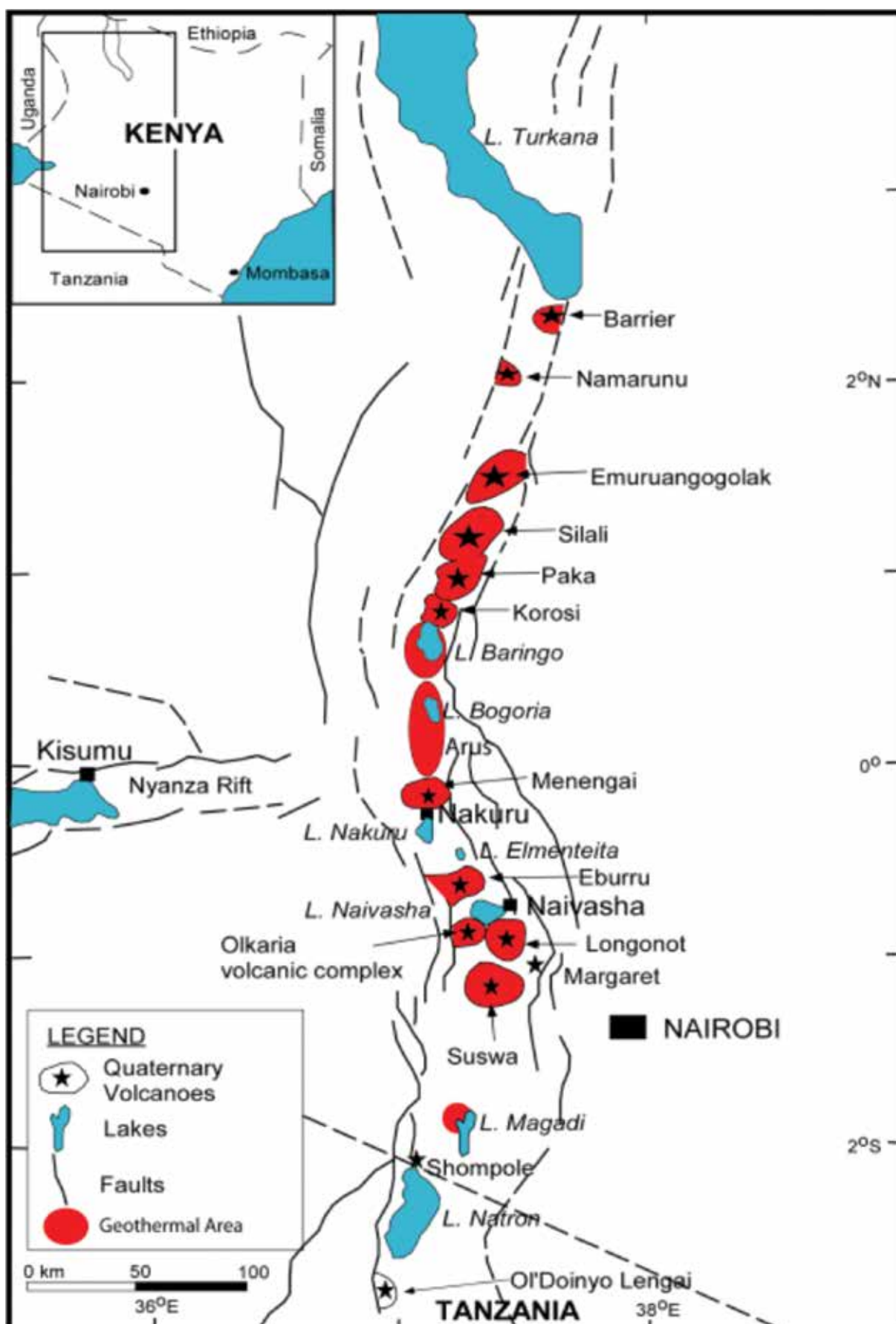
Acarbose is sold by the German pharmaceutical giant, Bayer. How is it made? In 1995, five years after Glucobay was commercialized in Europe and one year before it was released in North America, Bayer filed for patent on a new way to manufacture the product. The patent application, which subsequently issued in Europe, the US, and Australia, (4) reveals that an *Actinoplanes* sp. bacteria strain called SE 50 had unique genes that enable the biosynthesis of acarbose in fermentors. The strain comes from Kenya’s Lake Ruiru.

In 2001, in an article in the *Journal of Bacteriology*, a group of Bayer scientists and German academics confirmed that SE 50 was being used to manufacture acarbose. (5) In the article, they described manufacture of acarbose and related compounds. Although their paper did not mention Kenya or Africa, it did say that “The oral antidiabetic agent [acarbose] is produced by fermentation of the actinomycete *Actinoplanes* sp. strain SE50.”

SE50 is the same strain that was identified as Kenyan in the patent application filed six years before.

In 2004, Bayer sales of acarbose totaled €278 million (US \$379 million, as of 31 Dec 2004). (6) I could find no evidence of a benefit-sharing agreement related to this extremely valuable microbe.

Annex 3: Extent of Geothermal exploration and development in Kenya's Rift Valley



Source: 2007. Oeter Omenda (KenGen), status of geothermal exploration in Kenya and future plans for its development.

