

Action Plan for Implementing the Convention on Biological Diversity's Programme of Work on Protected Areas



Figure 1

Submitted to the Secretariat of the Convention on Biological Diversity

14th June 2012

Protected area information:

PoWPA Focal Point:

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Lead implementing agency: (Kenya Wildlife Service)

Multi-stakeholder committee: Possible stakeholders:

1. Ministry of Environment and Mineral Resources (MEMR)
2. Ministry of Lands
3. Kenya Forest Service
4. National Environment Management Authority
5. Department of Resource Surveys and Remote Sensing
6. National Museums of Kenya
7. Kenya Marine and Fisheries Research Institute
8. African Wildlife Foundation
9. African Conservation Centre
10. Northern Rangelands Trust
11. Wildlife Conservation Society
12. UNEP
13. International Livestock Research Institute

Description of protected area system

National Targets and Vision for Protected Areas

Kenya's founding president Mzee Jomo Kenyatta underscored the importance of protected area conservation in Kenya when he made the following statement.

"The natural resources of this country, its wildlife which offers such an 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.

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 co-operation of the other Governments of East Africa in this important task but, at present, we are unable, unaided, to provide the specialist staff and money which are necessary. We therefore invite other nations, and lovers of nature throughout the world, to assist us in honouring this solemn pledge."

In its draft Wildlife Policy of 2007 (awaiting approval by parliament), Kenya recognizes that protected areas (PAs) carry out numerous functions that are beneficial to human welfare, the country and international community. It further recognizes that PAs conserve a spectacular range of terrestrial and marine species, habitats and ecosystems including biodiversity hotspots. In addition, the draft policy recognizes that besides conserving wildlife species of conservation importance for the country's sustainable development and people's well being, these ecosystems also provide critical ecosystem services such as watershed protection, carbon sequestration, pollination, nutrient cycling and soil regeneration.

Kenya has not finalized her protected area gap assessment. It therefore does not have a comprehensive set of targets for its protected area system. This is except for the case of its forests for which the country has under its current constitution set a target of 10% tree cover by 2030.

At a policy level however, Kenya has in its draft Wildlife Policy of 2007 made the following policy statements. The country shall:

- 1. Strengthen the ecological network of national parks and reserves through designation of buffer zones and robust linking zones such as wildlife migratory corridors and dispersal areas.*
- 2. Rationalize, maintain and develop the existing PAs and, where appropriate, establish new PAs with stakeholder and community involvement.*
- 3. Develop, gazette and implement approved management plans, through participatory processes, as the basis for the management of PAs.*

4. *Establish collaborative management arrangements and joint ventures that enhance local community and private sector involvement in the management of PAs.*
5. *Develop an effective mechanism for sharing benefits including revenue with communities living adjacent to PAs.*
6. *Establish clear and easily recognizable boundary markers of PAs, which are monitored and controlled.*

Specific to National Reserves

7. *Ensure that each local authority engaged in wildlife conservation and management develops and implements a gazetted integrated ecosystem-based management plan for the protected area under their jurisdiction;*
8. *Ensure that at least 25% of the revenue collected by the respective local authority in respect of a particular national reserve is allocated for wildlife conservation and management.*
9. *Develop mechanisms that will enable local authorities to enter into transparent management agreements with appropriate professional wildlife conservation institutions or organizations to provide technical expertise and finances in the management of the respective national reserves under their jurisdiction.*
10. *Ensure that local authorities put in place a participatory framework for local communities residing within the respective wildlife conservation area to effectively participate in wildlife conservation and management planning, implementation and decision making processes, as well as benefit sharing.*
11. *Build capacity for the personnel of respective local authorities involved in the management of national reserves for effective wildlife conservation and management.*

At the same time, Kenya's main wildlife agency, the Kenya Wildlife Service (KWS) has recently redefined its vision with a view to strengthening Kenya's PA system. Its new vision is "**Saving the Last Great Species and Places on Earth for Humanity**".

As the country continues to make efforts to conduct a formal gap assessment, the above policy statements and vision will help guide in the setting of targets.

Coverage

Kenya's protected area system consists mainly of wildlife protected areas (WPAs) and forest protected areas (FPAs). These two major types of protected areas cover about 10% of Kenya's land mass. Kenya's land mass is 582,646 Sq Km. Of the 10% protected area cover, 8.2% belongs to WPAs while 1.8% belongs to forests. It is however useful to note that WPAs and FPAs are not completely separate entities. There are several cases in which these two protected area types overlap.

For the 8.2% of Kenya's land mass that is WPAs, 8.04% (46,897 Sq Km) is occupied by terrestrial parks, reserves, sanctuaries and conservancies while 0.13% (776 Sq Km) is occupied by marine parks and marine reserves. The geographic distribution of all of these protected areas is as shown in Figure 2 below.

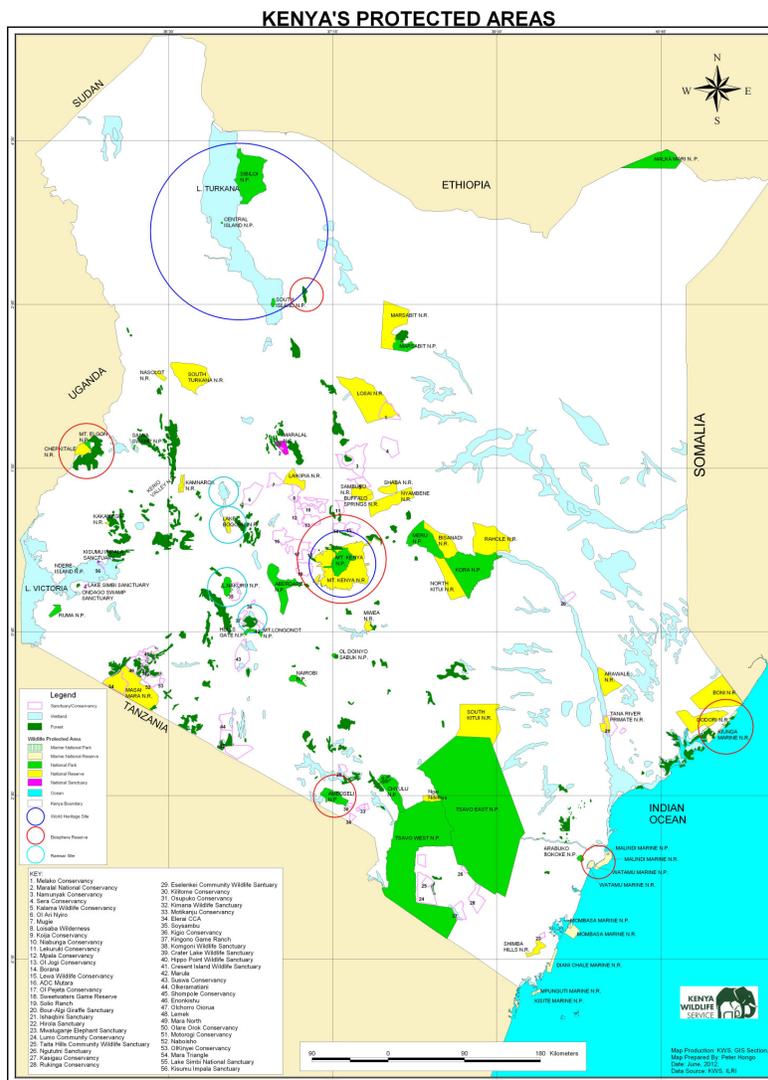


Figure 2

Description and background

In the olden days Kenyans lived in harmony with nature taking only what they needed to survive. There was then no need of having protected area as the Kenyan population was small and it did not have any significant negative impacts on the environment. By the late 1800s however and after European immigrants had come into Kenya, the negative impacts of human population activities on the environment began to be felt. To counter these negative impacts, protection measures started to be put into place.

With regard to wildlife, what was then known as the Southern Game Reserve was established in 1889. In this reserve hunting was not permitted. However, all other kinds of human activities that included livestock grazing and farming were allowed. Consequently, the negative impacts from human activities continued to take their toll on Kenya's wildlife. This led the conservationist Marvyn Cowie to start a campaign on the establishment of a national park system in Kenya. Cowie's campaign bore fruit in 1946 when the Kenya Government agreed to create Kenya's first national park, the Nairobi National Park. This was soon followed by the creation of Kenya's largest park, the Tsavo National Park in 1948. Tsavo National Park was then divided into Tsavo East National Park and Tsavo West National Park for ease of management. The two Tsavos occupy about 44% (20,812 Sq Km) of Kenya's wildlife protected area system.

Since the late 1940s, Kenya has continued to establish more WPAs. To date it has about 67 WPAs. It however needs to be noted that few of these protected areas have come under serious encroachment by human activities.

With respect to forests considerable legislation has been undertaken over the years to ensure that forests are protected. The first forest legislation was put in place in 1891 to protect mangrove forests at Vanga on the Kenyan coast. In 1908 major gazettment of forest blocks, boundary surveying and marking was undertaken. In 1942 the first Forest Act was put into place while in 1957 the first policy paper on forestry was formulated. This eventually led to the approval by Cabinet of Kenya's Forest Policy in 1996 and which was subsequently revised in 2007. However, despite the legislation and policies aimed at protecting Kenya's forests, their destruction has continued.

Governance types

Management Category	Governance Type					
	Government		Private			Community
	National	Local	Declared and run by individual land-owner	By non-profit organisations	By for-profit organisations	
National Park	X					
National Reserve	X	X				
National Sanctuary	X	X				
Private Sanctuary			X	X	X	
Conservancy			X	X	X	X
Forest Reserve	X	X				X

Key threats

Habitat Change:

Major threats to Kenya's PA system include those of habitat change, invasive alien species, human wildlife conflict and climate change.

At a national level and with respect to habitat change, agriculture is a key contributor. As Kenya's population has continued to grow rapidly (currently at about 1 million per year) more and more land has been put under agriculture (see Figures 3, 4 and 5 below). From Figures 3 and 4 one can see agriculture closing in on the world famous Masai Mara National Reserve. From Figure 5 one can at a national scale see the pressure from agriculture on Kenya's WPA system. A lot of the land into which agriculture has been expanding is marginal and has traditionally been for wildlife.

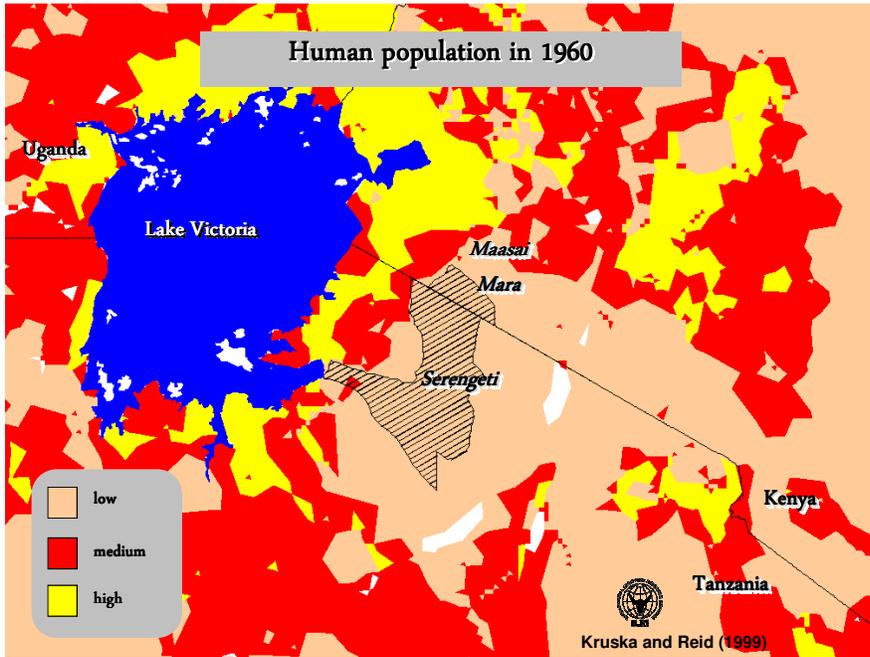


Figure 3

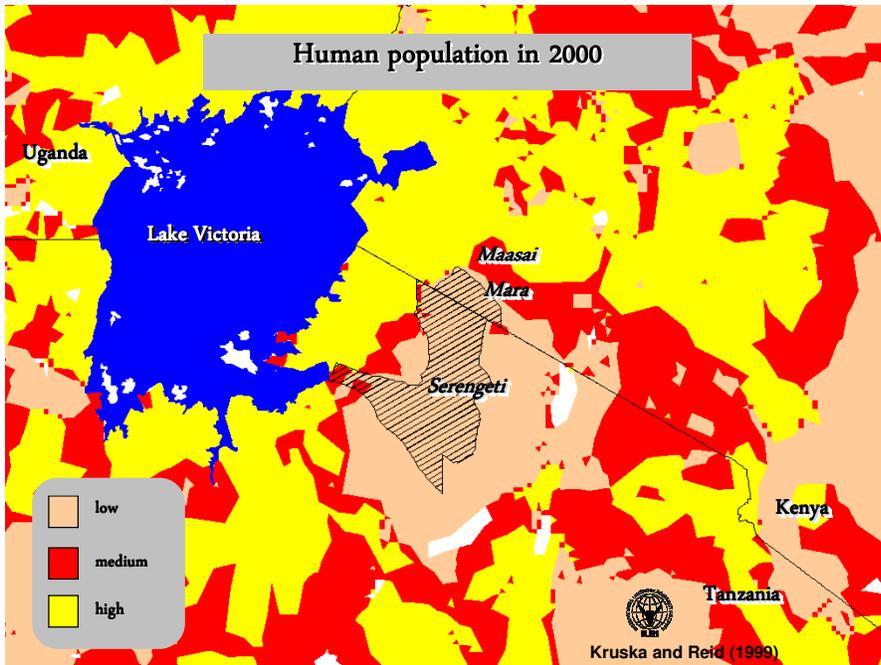


Figure 4

WILDLIFE PROTECTED AREAS AND AGRICULTURE - YEAR 2000

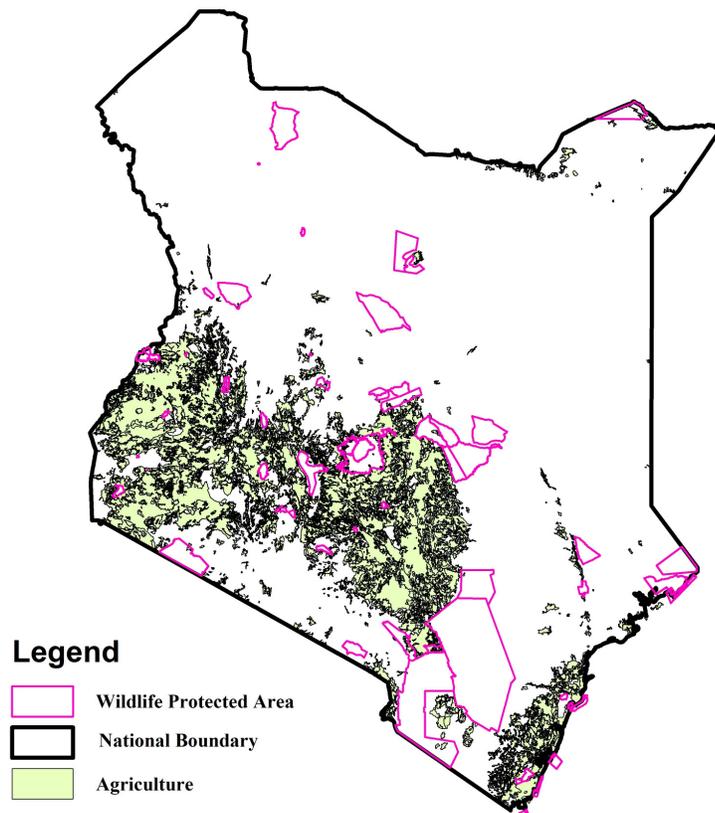


Figure 5 (Source of data: KWS, FAO Africover 2000)

Habitat change has also taken place through forest destruction in some of Kenya's forests. This is shown in Figure 6 and 7 below using the case for Mau and Mt. Kenya. These are two of Kenya's five major water towers.

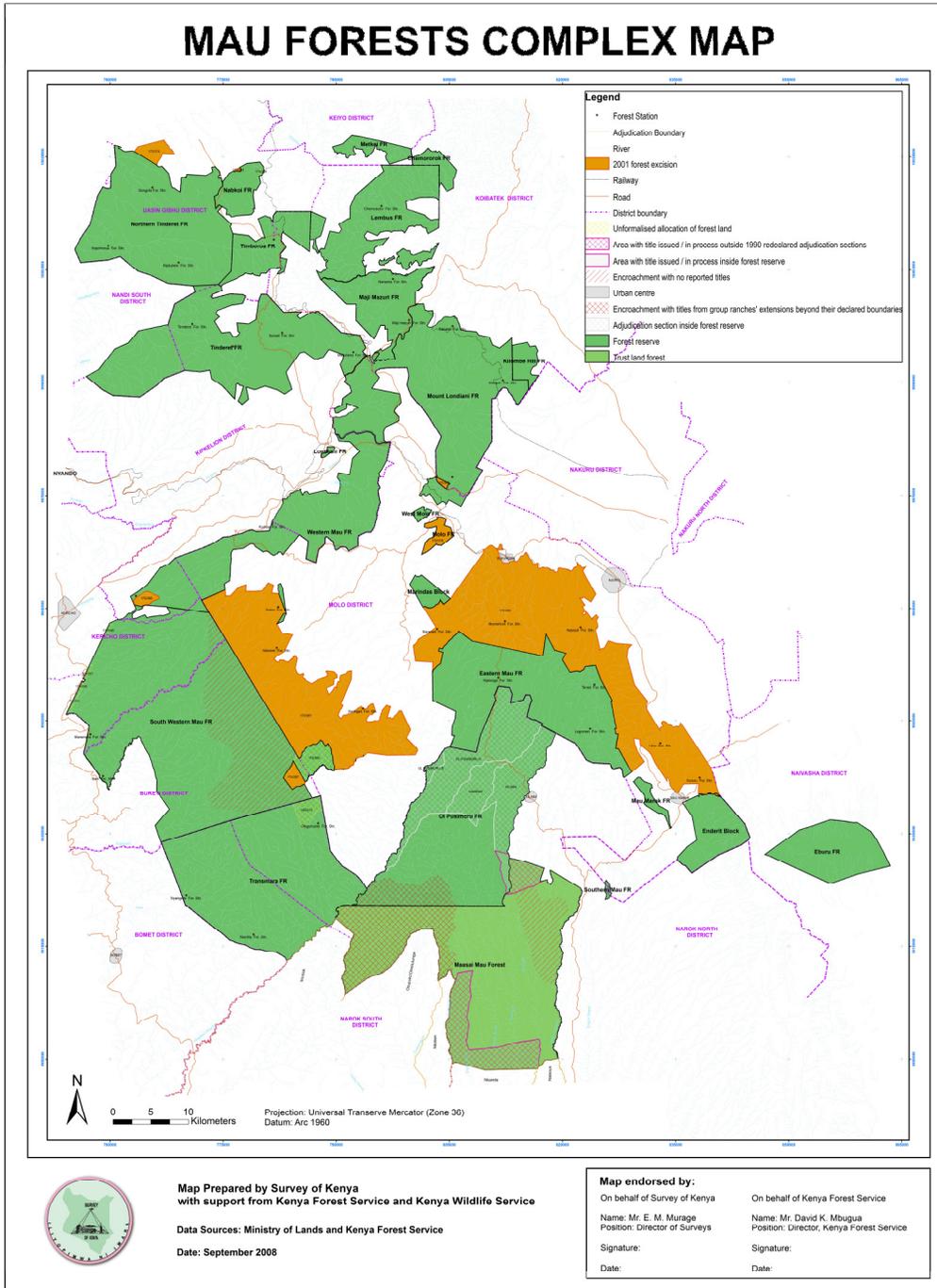


Figure 6

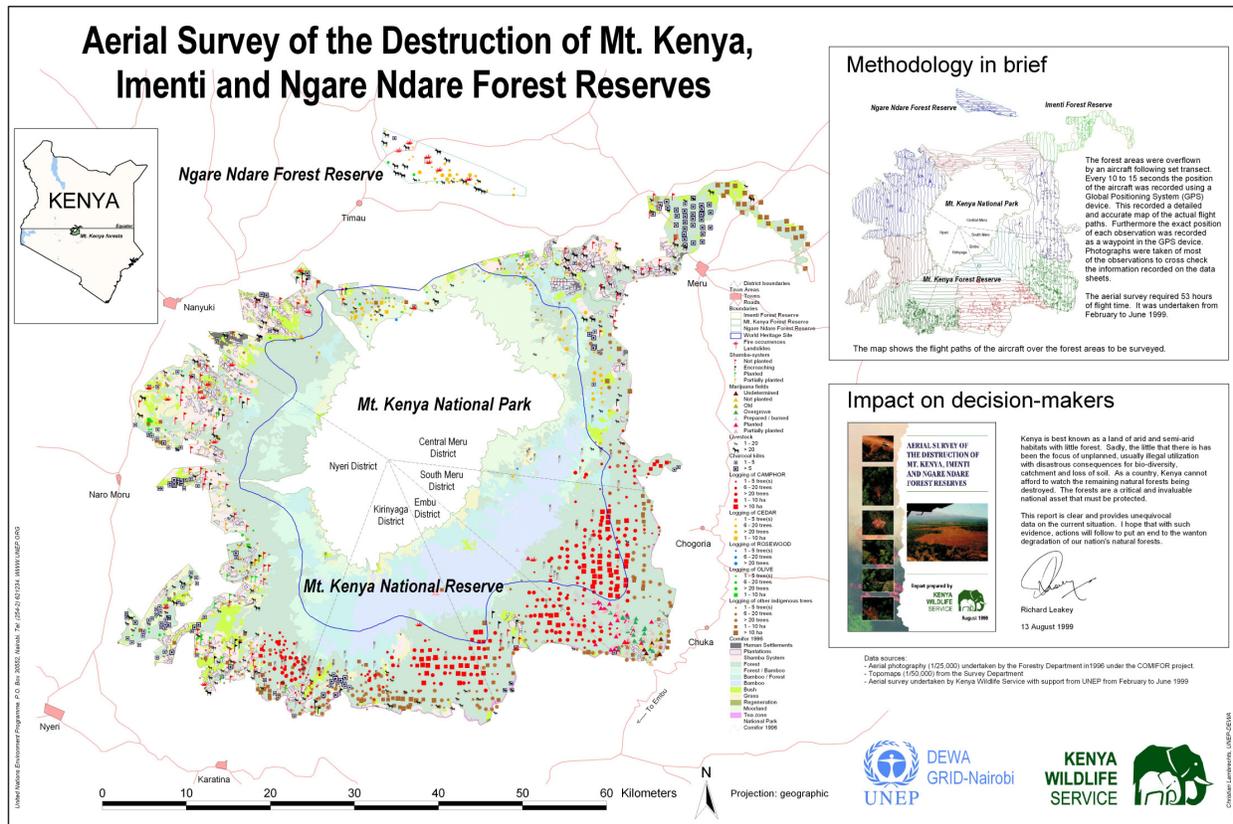


Figure 7

Invasive Species:

The Centre for Agricultural Biosciences International (CABI) has made the observation that the high rate of invasion by alien species could destroy East Africa's protected areas. In particular, CABI has observed that the invasive species *Lantana camara* is present in virtually every PA in East Africa. Further, CABI has observed that the invasive species *Prosopis* is threatening to invade PAs that include Tsavo National Park, Arawale, Lake Bogoria, Shaba, Samburu, Marsabit and Tana River Primate National Reserves.

KWS has already started the process of mapping the occurrence of invasive species in its PAs. It has completed this for OI Donyo Sabuk National Park (see Figure 8 below). OI Donyo Sabuk is a small park (18 Sq Km) that is about 70 Km to the north east of Nairobi.

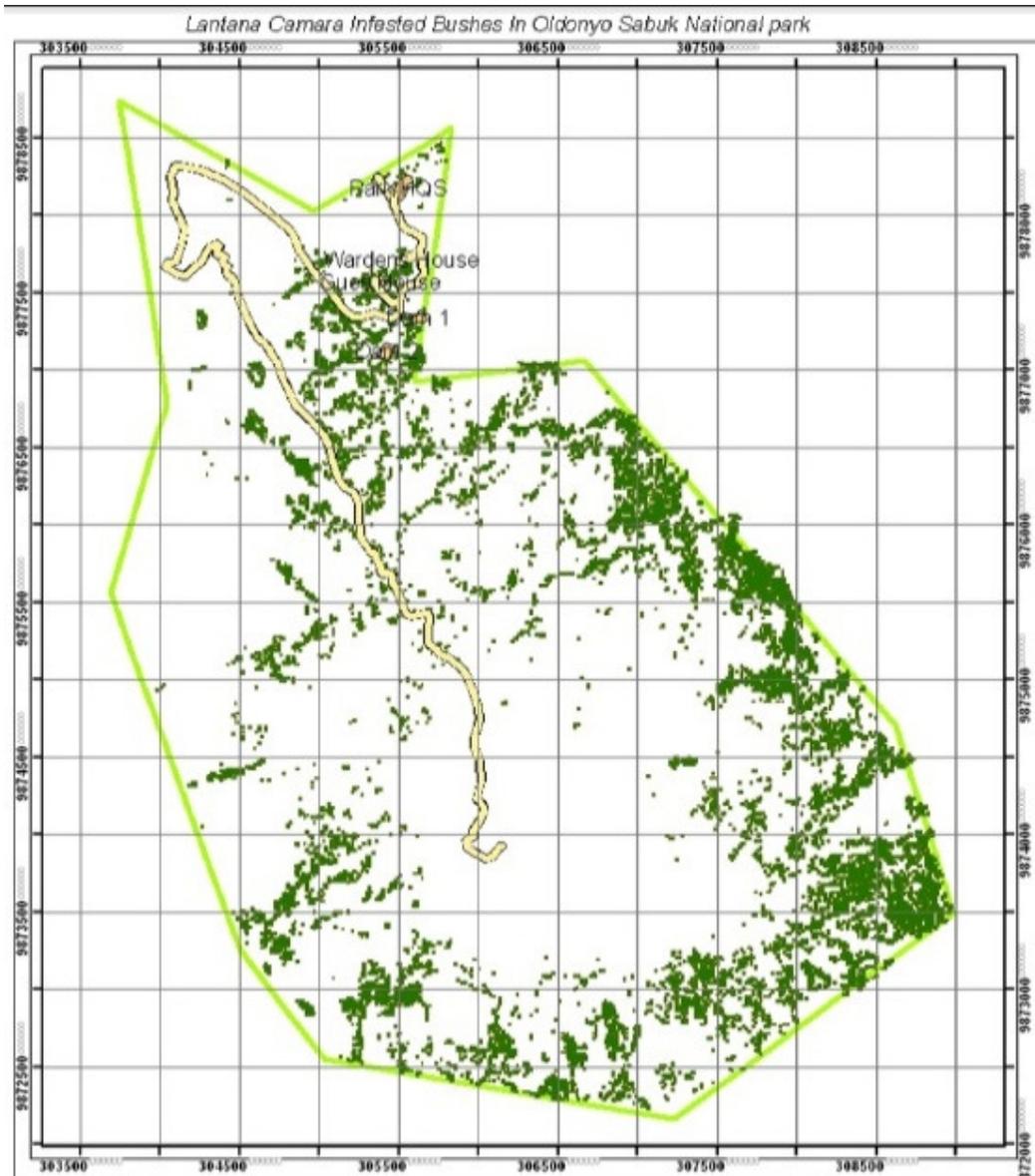


Figure 8

Human Wildlife Conflict:

In a study titled “Wildlife Human Conflicts In Kenya – Report of the Five Person Review Group” that was conducted in 1994, the following was observed.

“The wildlife-human conflict is acutely real in practically all districts in Kenya. Conflict is most intense when agriculture is involved, particularly where cropland borders forested national parks and in pockets of agriculture surrounded by rangeland. The dominant view is that under current law and management, wildlife is a liability imposed upon landowners; most are desperate for relief.”

Since the above study human wildlife conflict has not abated and especially because of Kenya's population that has continued to grow at a high rate. The national picture with respect to human wildlife conflict is as shown in Figure 9 below.

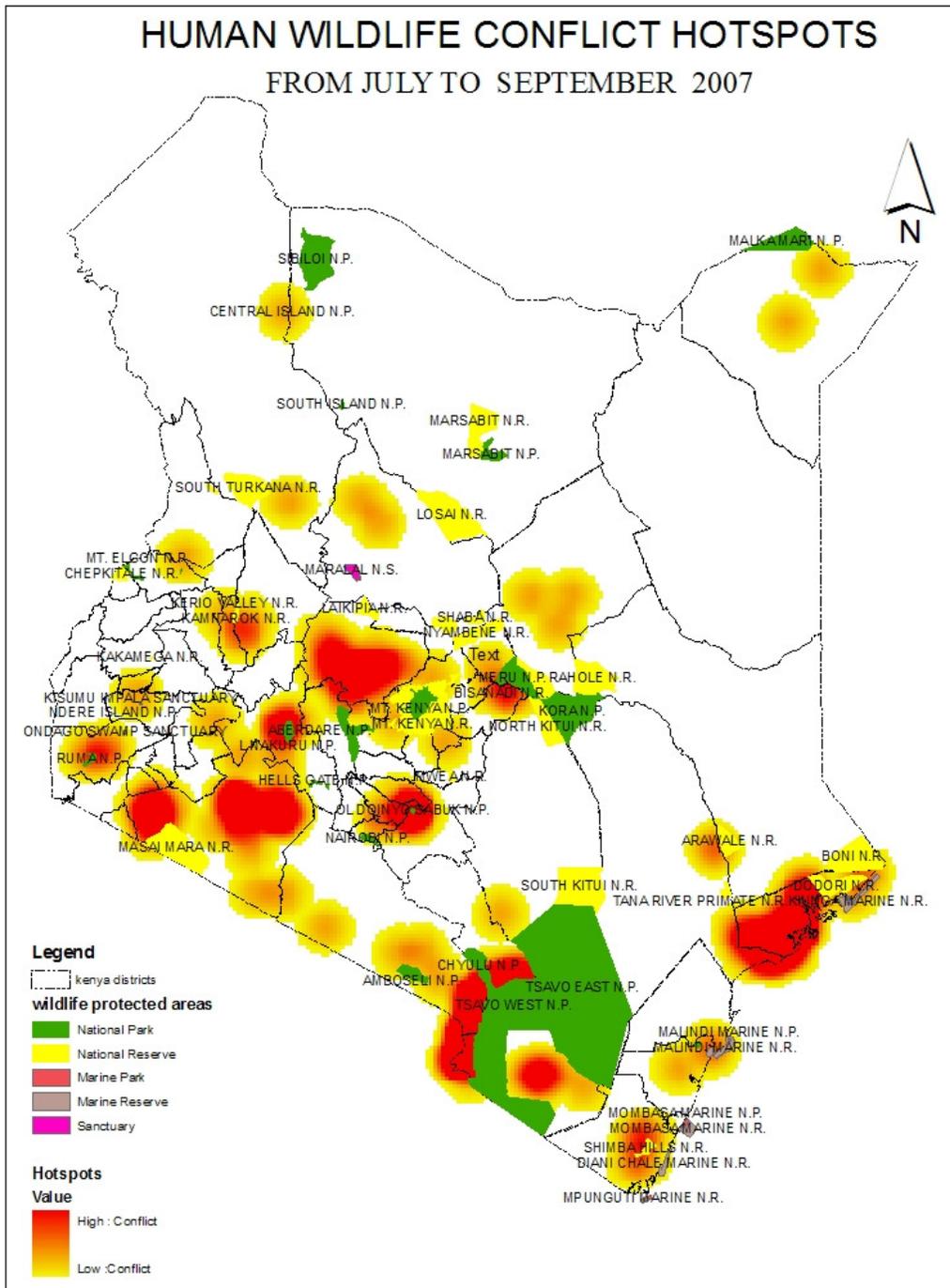


Figure 9

Barriers for effective implementation

There are several barriers to effective implementation. These include those of a policy, legal, economic, institutional, technical nature.

Policy:

At a policy level there are conflicting policies. During a Kenya Biodiversity Conference held in 2010, it was observed that one of the threats to biodiversity is the conflicting policies among sectors and ministries governing natural resource use. For instance, irrigation schemes for agricultural development on the Tana River threaten habitats and wildlife in the Tana River Primate Reserve and in the Tana Delta wetlands that support large pastoral populations and a rich biodiversity.

Further, in the Draft Wildlife Policy of 2007, the following were cited as the factors that necessitate a new wildlife policy.

- (a) Lack of a comprehensive wildlife policy and law in light of changed circumstances;
- (b) Rapid change of tenure and land use in wildlife rangelands from communal to private ownership, associated land subdivision, fencing and conversion for other uses particularly agriculture, infrastructure and urban development;
- (c) Perverse economic incentives especially in the agricultural sector which adversely affects wildlife conservation and management initiatives;
- (d) Institutional governance that has not integrated various stakeholders in the wildlife conservation and management;
- (e) Increased human-wildlife conflicts and inadequate compensation;
- (f) The need to harmonize the wildlife policy and law with the framework environmental law – the Environment Management and Coordination Act (1999);
- (g) The need to domesticate relevant international and regional wildlife related conventions and treaties that Kenya is a party;
- (g) The need for decentralization and devolution of wildlife management to the lowest level possible and enlist the participation of the private sector, non-governmental organizations (NGOs), community based organizations (CBOs) and other non-state actors;
- (h) Marked decline in wildlife numbers and loss of biodiversity;
- (i) Inadequate research capacity and absence of reliable and up to date data on wildlife;
- (j) The need to define wildlife; and
- (k) The need to harmonize the wildlife policy with long term economic development.

Economic:

From an economic standpoint wildlife is in general less attractive than other forms of land-use. Consequently significant amounts of land that are suitable for wildlife have been converted into agriculture. An example of this is a lot of land surrounding the famous Masai Mara National Reserve. Large wheat farms have appeared in what were previously wildlife corridors and dispersal areas.

Still related to economics is the fact that the major custodian of Kenya’s WPAs, the Kenya Wildlife Service, is currently not financially self-sustaining . KWS still has to rely on Government subventions and donor support in an attempt to balance its budget. This means that there are times when some activities are not undertaken due to financial constraints.

Institutional:

At an institutional level there are cases where more than one institution has jurisdiction over a part of a given protected area. KWS has jurisdiction on all National Parks but the Kenya Forestry Service has jurisdiction on the plantation forests that are found in these Pas and this poses challenges in effective implementation.

Technical:

Substantial skills are required to design and manage a protected area system that can be conserved into perpetuity. Whereas many of the actors in Kenya’s PA system have good skills there are still limited skills in specialized areas such as those of designing an optimal PA system.

Status, priority and timeline for key actions of the Programme of Work on Protected Areas

Status of key actions of the Programme of Work on Protected Areas

Status of key actions of the Programme of Work on Protected Areas	Status
<ul style="list-style-type: none"> Progress on assessing gaps in the protected area network (1.1) 	2
<ul style="list-style-type: none"> Progress in assessing protected area integration (1.2) 	1
<ul style="list-style-type: none"> Progress in establishing transboundary protected areas and regional networks (1.3) 	1 (Kisite and Tanga;)
<ul style="list-style-type: none"> Progress in developing site-level management plans (1.4) 	3 (KWS managed), 2 (CMAs and conservancies).
<ul style="list-style-type: none"> Progress in assessing threats and opportunities for restoration (1.5) 	2 (collate information)
<ul style="list-style-type: none"> Progress in assessing equitable sharing of benefits (2.1) 	2
<ul style="list-style-type: none"> Progress in assessing protected area governance (2.1) 	2
<ul style="list-style-type: none"> Progress in assessing the participation of indigenous and local communities in key protected area decisions (2.2) 	2
<ul style="list-style-type: none"> Progress in assessing the policy environment for establishing and managing protected areas (3.1) 	3
<ul style="list-style-type: none"> Progress in assessing the values of protected areas (3.1) 	2
<ul style="list-style-type: none"> Progress in assessing protected area capacity needs (3.2) 	4 (for KWS), 1-2 conservancies etc

• Progress in assessing the appropriate technology needs (3.3)	4 (KWS)
• Progress in assessing protected area sustainable finance needs (3.4)	2 (endowment fund)
• Progress in conducting public awareness campaigns (3.5)	3 (requires better coordination).
• Progress in developing best practices and minimum standards (4.1)	2 (KWS), integrated approaches
• Progress in assessing management effectiveness (4.2)	2 (KWS), 0 (CMA & conservancies)
• Progress in establishing an effective PA monitoring system (4.3)	2 (MIST)
• Progress in developing a research program for protected areas (4.4)	3 (KWS); 1 (CMA)
• Progress in assessing opportunities for marine protection	2
• Progress in incorporating climate change aspects into protected areas	2

Status: 0 = no work, 1 = just started, 2 = partially complete, 3 = nearly complete, 4 = complete
(Insert notes as appropriate)

Priority actions for fully implementing the Programme of Work on Protected Areas:

(Insert priority actions)

PoWPA Action	Action
Progress on assessing gaps in the protected area network (1.1)	<ul style="list-style-type: none"> Finalize PA gap analysis. Implement findings.
Progress in assessing protected area integration (1.2)	<ul style="list-style-type: none"> Gap analysis. Mainstream recommendations of the assessment .
Progress in establishing transboundary protected areas and regional networks (1.3)	<p>Complete current discussion on terrestrial and marine transboundary areas.</p> <p>Formalize agreements for transboundary PAs (MOU etc).</p>
Progress in developing site-level management plans (1.4)	- complete and review Management plans for PA and CMA without plans (incorporate climate change issues).
Progress in assessing equitable sharing of benefits (2.1)	<ul style="list-style-type: none"> Complete socioeconomic assessments. assess benefit sharing. design or improve programs for benefit

	sharing.
Progress in assessing protected area governance (2.1)	<ul style="list-style-type: none"> • complete governance analysis • harmonize finding with national policies
Progress in assessing the participation of indigenous and local communities in key protected area decisions (2.2)	<ul style="list-style-type: none"> • assess the extent of participation of communities • increase awareness on PA • develop guidelines for participation • harmonize and integrate across sectors
Progress in assessing the policy environment for establishing and managing protected areas (3.1)	<ul style="list-style-type: none"> • Finalization of wildlife bill and policy and other sectors (Forestry, Fisheries, Environment, Land use, Agriculture etc • Complete a policy assessment • Implement priority parts of the assessment
Progress in assessing the values of protected areas (3.1)	<ul style="list-style-type: none"> - carry out a national valuation of PA - raise awareness on value of PA
Progress in assessing protected area capacity needs (3.2)	<ul style="list-style-type: none"> - carry out a national capacity needs assessment - Prioritization of capacity building program
Progress in assessing the appropriate technology needs (3.3)	<ul style="list-style-type: none"> - National level assessment of technology needs - Implement findings from the assessment
Progress in assessing protected area sustainable finance needs (3.4)	<ul style="list-style-type: none"> - Assessment of resource needs especially for CMA - Build capacity and implement sustainable business plans for CMA
Progress in conducting public awareness campaigns (3.5)	<ul style="list-style-type: none"> - Develop a harmonized program of awareness - Implement priority elements of the program
Progress in developing best practices and minimum standards (4.1)	<ul style="list-style-type: none"> - Raise awareness about current procedures and standards - Develop standards CMAs etc
Progress in assessing management effectiveness (4.2)	<ul style="list-style-type: none"> - Complete MEs for all Pas - implemented findings
Progress in establishing an effective PA monitoring system (4.3)	<ul style="list-style-type: none"> - Build capacity in use of MIST across Pas - Integration and collation of information

	<ul style="list-style-type: none"> - Dissemination of findings - Implementation of findings (adaptive management)
Progress in developing a research program for protected areas (4.4)	<ul style="list-style-type: none"> - Identify priorities (sites and subjects) - Develop research programs to address findings - Database of scientists and programs of relevance to PA - Forum for information exchange (Wildlife symposium ?) - Develop coordination mechanism for scientific research
Progress in assessing opportunities for marine protection	<ul style="list-style-type: none"> - Complete ecological gap analysis - Develop programs to fill in the gaps
Progress in incorporating climate change aspects into protected areas	<ul style="list-style-type: none"> - Complete the climate change response action plan - Implement priority actions - Awareness programs for climate change

Timeline for completion of key actions

Action Plans for completing priority actions of the Programme of Work on Protected Areas

Action 1: Assess management effectiveness

Key steps	Timeline	Responsible parties	Indicative budget (USD)

Action 2: Assess protected area finance

Key steps	Timeline	Responsible parties	Indicative budget

Action 3: Assessing gaps in the protected area network (1.1)

Key steps	Timeline	Responsible parties	Indicative budget
Conduct capacity building in gap analysis skills (includes training, purchase of software and hardware).	Sep-Nov 2012	KWS	156,410
Select Gap Analysis team and organize inception meeting.	Apr 2013	KWS	700
Identify focal biodiversity and set key targets	Apr-Jun 2013	KWS, MEMR, KFS, KEMFRI, DRSRS, NMK, AWF, ACC, NRT, WCS, UNEP,ICIPE,ILRI	12,500
Evaluate and map the occurrence and status of biodiversity	Jul-Dec 2013	“	98,000
Analyze and map the occurrence and status of protected areas	Jan-Jun 2014	“	99,000
Identify gaps	Jul-Sep 2014	“	18,000
Mid-Term workshop to share on data collected on occurrence, status and gaps	Oct-Dec 2014	“	21,425
Prioritize gaps to be filled	Oct-Dec 2014	“	10,000

Workshop to agree on implementation plan	Jan 2015	“	21,425
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Key assessment results

Ecological gap assessment

Kenya has not formally carried out EGA. However, it has undertaken several initiatives in the past that are closely related to EGA. The output from these initiatives will finally feed into the EGA process.

At a national level Kenya conducted a Biodiversity Country Study in 1991. It has also formulated a National Biodiversity Strategy and Action Plan.

At an institutional level KWS in 1997 spearheaded the implementation of a concept known as the minimum viable conservation area (MVCA). This was after recognizing that Kenya's PAs were not self-sustaining. KWS decided to map those areas outside Kenya's PA system that were vital to sustainable conservation. The areas mapped were wildlife dispersal areas and other areas of biodiversity importance. This was done qualitatively using expert knowledge from KWS officers in the field. The map output from the 1997 MVCA can be seen in Figure 10 below.

In 2007, KWS with several of its partners that included the Department of Resource Surveys and Resource Surveys (DRSRS) and the African Conservation Centre worked on refining the MVCA of 1997. During this time the scope was expanded to include all major taxa. An attempt was also made to get more quantitative. The map shown in Figure 11 below is an output from the second MVCA exercise. It gives a graphic example of a species (the giraffe) that is found in many instances outside Kenya's PA system hence showing the need for conserving outside the formal PA system.

In 2010, MEMR with KWS and their partners hosted a conference on biodiversity, land-use and climate change. During the run-up to this conference, additional work was done to refine the MVMAs done earlier.

Currently, MEMR has commissioned the creation of an atlas on Kenya's biodiversity. During this exercise, considerable data that can feed directly into EGA will be collected.

From the above it therefore means that when Kenya gets to formally conduct its EGA a lot of the groundwork required for a successful EGA will have been covered.

GRID ANALYSIS (1/2 Degree)

GIRAFFE

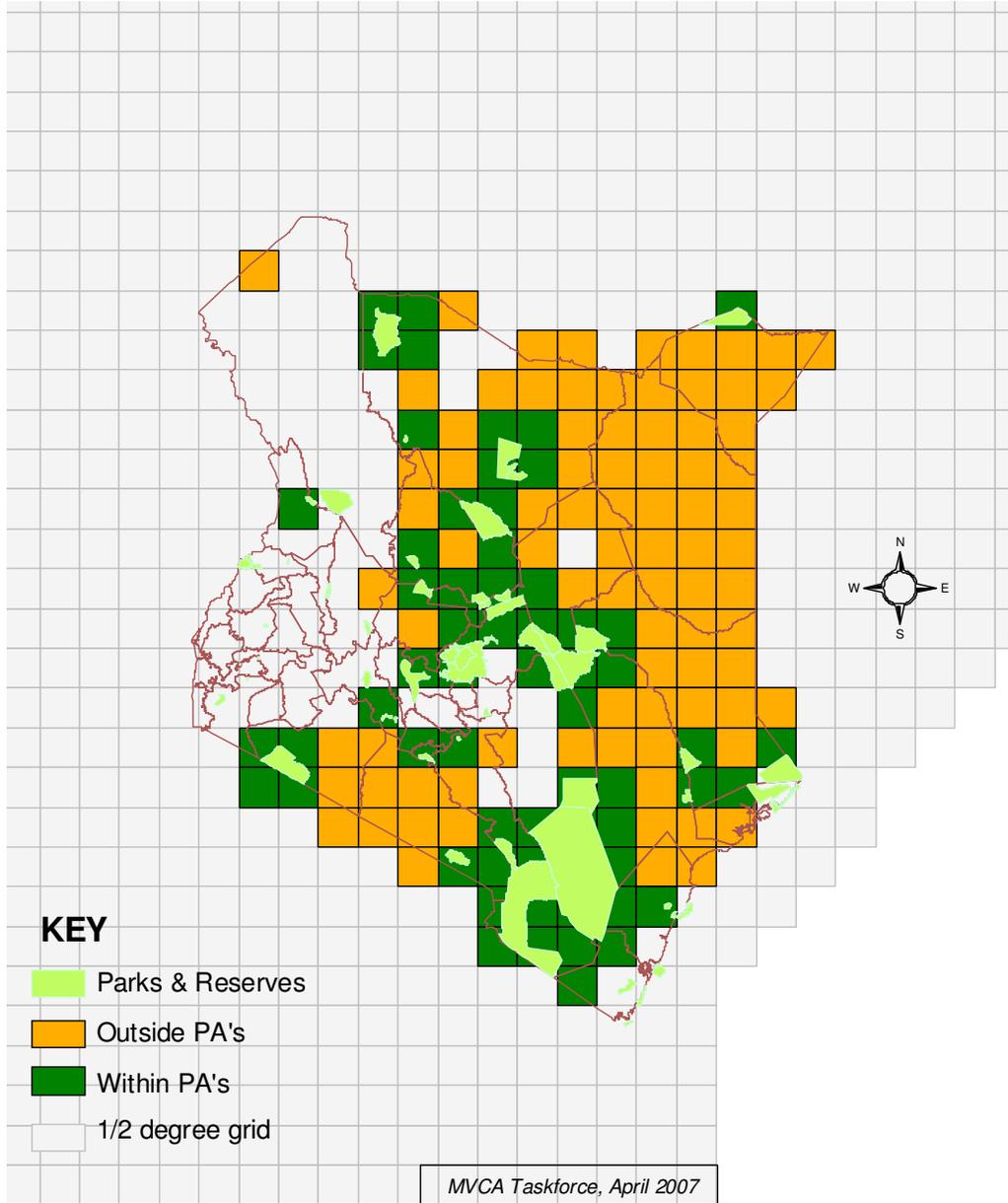


Figure 11

Management effectiveness assessment

Kenya has not done a comprehensive management effectiveness assessment yet. Looking at the PA system however, one can get an overview picture on the management effectiveness in its PAs.

At the negative end one is able to see some PAs that have been overrun by human settlements and related activities. These are PAs such as Malka Mari, Losai, Rahole, Laikipia and Ngai Ndethya. One is also able to observe forest destruction that has occurred in major water towers such as Mt. Kenya and Mau.

At the positive end however, one is able to notice the increase in endangered species such as the rhino and elephant (see Figures 12 and 13 below).

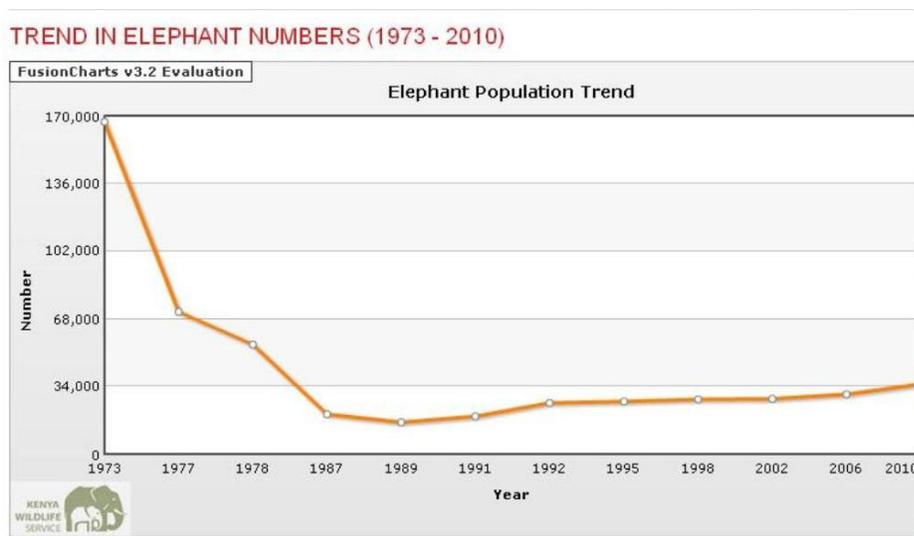


Figure 12

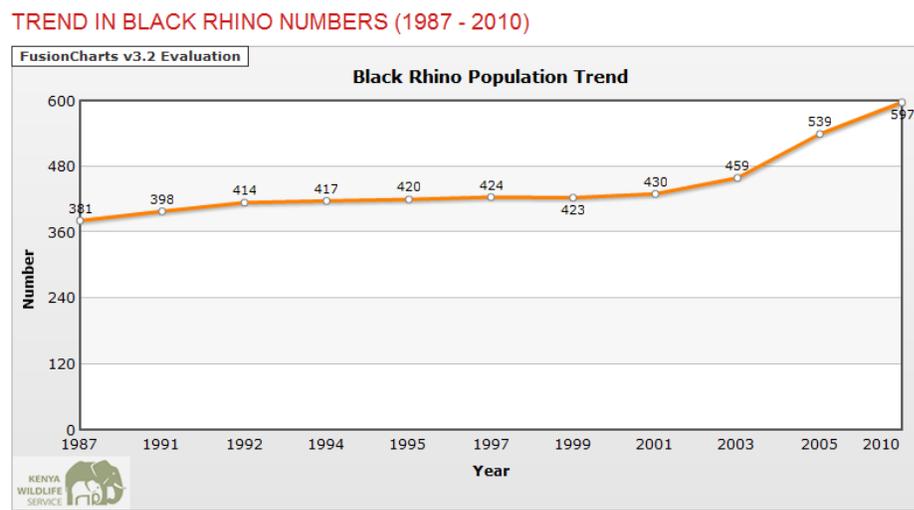


Figure 13

One is also able to see the rehabilitation of forests. In the case of Aberdare Forest there has been an increase of 20.6% forest cover between 2005 and 2010. This is due to the now complete 400 Km fence that surrounds Aberdare National Park.

Sustainable finance assessment

KWS' Strategic Plan that is currently under development has three core themes. One of these is financial sustainability. Under this theme, KWS will continue to pursue its endowment fund initiative. Through this endowment fund, KWS aims at raising US\$ 100 Million by 2020. The key objective of the fund is to produce a sustainable source of funding for wildlife conservation and its habitats to benefit present and future generations.

Policy environment assessment

As indicated above, Kenya has recognized that there are shortcomings in its current Wildlife Policy and Wildlife Act. Under the Ministry of Forestry and Wildlife, it has gone ahead and drafted a new wildlife policy and bill. These two instruments will help strengthen Kenya's PA system. There is a good chance that the policy and bill will get passed during the life of Kenya's eleventh parliament that will start in 2013. At the same time Kenya is in the process of revising its Forest Policy and which will go to strengthen Kenya's Forest Protected Areas.

In addition the MDGs, Kenya's development blueprint known as Vision 2030, Kenya's newly enacted constitution and Land Act all contain clauses that are very supportive of PAs. The current policy environment in Kenya is therefore conducive to PA enhancement.

Protected area valuation assessment

Kenya has not yet carried out a comprehensive valuation of its natural capital. It has however done some specific valuation for two of its premiere PAs the Aberdare (766 Sq Km) and Mt. Kenya (715 Sq Km). The Aberdare has been valued at USD 63 Million and USD. At the same time the total economic value (TEV) of Watamu Marine National Park and Reserve (42 Sq Km) has been estimated at USD 130,335. This is excluding values of fuelwood, timber, carbon sequestration and coastal protection.

Climate change resilience and adaptation assessment

At a national level Kenya and under MEMR has formulated a National Climate Change Response Strategy. The aim of this strategy is to respond to the challenges that climate change poses to Kenya's

socio-economic development. The strategy will be implemented over the next 20 years at an annual average cost of USD 3.14 billion.

At an institutional level, KWS is investing USD 3 Million for drought mitigation in wildlife management across the country. This is in way of combating the negative impacts of climate change. At the same time, KWS has trained 60 of its staff and stakeholders on climate change.

On the Kenya Forest Service side, the organization is currently undertaking wall to wall mapping of forests in Kenya. A major objective of this exercise is to give Kenya a strong foothold when negotiating for carbon credit funding.