ARABUKO-SOKOKE FOREST

Elephants Conservation Action Plan

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NABU German Society for Nature Conservation

NatureKenya The East Africa Natural History Society

Arabuko-Sokoke Forest Elephants Conservation Action Plan

Produced at a stakeholders workshop held from 5th to 7th February 2013 at Gede Ruins, Kenya

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ACRONYMS/ABBREVIATIONS

AfESG	Afiican elepahnt Specialist Group
ASF	Arabuko-Sokoke Forest
ASFMT	Arabuko-Sokoke Forest Management Team
CEC	County Environment Committee
CFA	Community forest associations
CSR	Corporate social responsibility
EMC	Elephant management committee
FOASF	Freinds of Arabuko-Sokoke Forest
HEC	Human elephant conflicts
IGAs	Income generating activities
KEMFRI	Kenya Forestry Research Institute
KFS	Kenya Forest Service
KWS	Kenya Wildlife Service
M&E	Monitoring and evaluation
MoU	Memorandum of understanding
NABU	Nature and Biodiversity Conservation Union
NEMA	National Environmental Management Authority
NGO	Non-governmental organization
NMK	National Museums of Kenya
PPP	Public-private partnership
REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestration and Degradation
UNESCO	United Nations Educational, Scientific and Cultural Organization

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Recomended Citation: KWS (2013) Arabuko-Sokoke Forest Elephants Conservation Action Plan, (2013-2023), Kenya Wildlife Service, Nairobi, Kenya

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FOREWORD

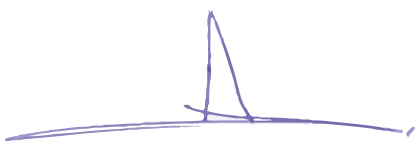
Patrick Omondi, OGW
Deputy Director, Wildlife Conservation
Kenya Wildlife Service

Kenya Wildlife Service (KWS) is a State Corporation established by an Act of Parliament, amendment Act No. 16 of 1989. The mandate of KWS is to conserve and manage wildlife resources in Kenya. Elephant is a keystone species in ecosystems that it occurs and is one of the major tourist attractions in many protected areas in Kenya. However, elephant conservation is fraught with many challenges including poaching, habitat loss and degradation and human-wildlife conflicts. To address the challenges, KWS formulated a National Elephant Conservation and Management Strategy with clear vision, mission and strategy objectives and a well defined implementation structure.

Arabuko-Sokoke Forest elephant population is one of the key coastal populations that are faced with challenges of human-elephant conflicts. High levels of conflict resulted to fencing of the forest boundary. The fencing however introduced other challenges associated with high densities in confined habitats. A structured approach of mitigating these challenges is therefore important.

This action plan has been developed at the right time. Its implementation requires the support by all stakeholders to ensure its success and address the elephant management challenges herein. The elephants of Arabuko-Sokoke are treasures of Kilifi County and KWS will continue to work with all stakeholders to ensure this population is conserved for future generations and posterity.

Implementation of this action plan cannot be achieved without adequate financial resources. KWS will work with other conservation partners to mobilize the required financial resources.



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Deputy Director, Wildlife Conservation
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ACKNOWLEDGEMENTS

We wish to acknowledge Kenya Wildlife Service and Nature Kenya for steering the process of formulating this action plan for managing elephants in Arabuko Sokoke Forest. We also salute all the stakeholders who participated in the workshop that formulated this action plan and/or commented on the draft plan. We wish to specifically thank Dr. Ronald Mulwa of the National Museums of Kenya for his role as the workshop facilitator. Special thanks go to NABU for funding the process and to Werner Schroeder and Svane Bender-Kaphengst for their contribution to ensuring that the process succeeded. Finally, we Acknowledge Drs. Ronald Mulwa, Paul Matiku, Shadrack Ngene and Paul Muoria for the final editing and proofreading of the strategy. Skinner Diane of AfESG provided material on Human Wildlife Conflict management.

EXECUTIVE SUMMARY

This action plan addresses the conservation challenges for the African Elephant (*loxodonta africana*) population occurring within the Arabuko-Sokoke Forest (ASF). This 420 Km^2 forest occurs in Kilifi county of Kenya's north coast some 110 km north of Mombasa. The forest is one of the last remnant indigenous forests in Kenya, the largest and most intact coastal forest in East Africa. The forest is a remarkable biodiversity hotspot, hosting 24 rare or endemic bird, mammal and butterfly species.

The need for a site specific action plan for ASF elephants emerges from the ecological and conservation challenges that currently this population namely faces; limited access to water, attempted poaching and restricted movement occasioned by ring-fencing to mitigate against crop raiding by elephants. Furthermore, due to high levels of poverty, the local communities harvest various resources from the forest which together with activities of the confined elephants do exert considerable pressure on this rather fragile ecosystem. These effects are likely to be accelerated by climate change.

This Action plan was developed during a Stakeholders workshop held at Gede Ruins from 5th to 7th February 2013. It seeks to identify and address conservation needs of ASF elephants and their habitat. The action plan aims at taking advantage of existing capacity and inter-stakeholder synergies to implementing the proposed action projects. This document will act as a bid for resources mobilization, since the intended activities have monitory implications. The action plan identifies eight strategic objectives including protection, population management, habitat management and connectivity, research and monitoring, human elephant conflicts management, incentives, capacity building, coordination and support. These objectives have been packaged into projects and activities.

INTRODUCTION

The African Elephant (*loxodonta africana*) is the largest terrestrial animal distributed in 37 countries in sub-Saharan Africa where their populations continue to be under severe threat owing to illegal trade in ivory and loss of habitat. Humans have encroached on their habitats leading to intense human elephant conflicts (HEC) due to crop raiding, destruction of property, human injury and even death in most of their range. Construction of electric fences to control this problem has been the most successful tool used in controlling HEC. However, this leads to blockage of migration routes, confinement of populations in inadequate habitats and genetic isolation of populations.

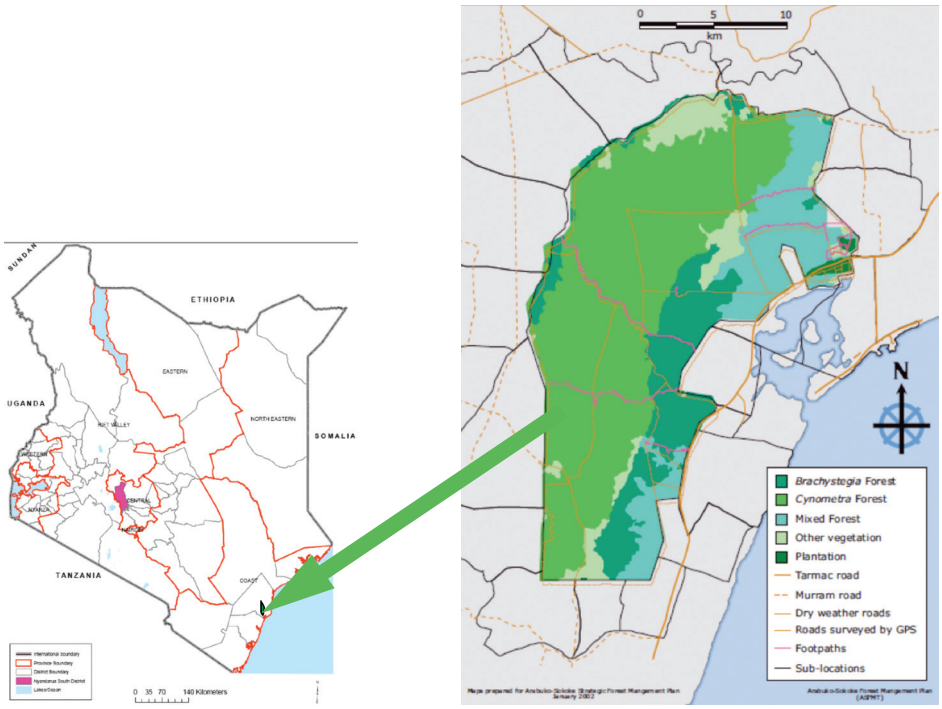
This action plan addresses the unique conservation needs for the African Elephants occurring within the Arabuko-Sokoke Forest (ASF) in Kenya's north coast (Figure 1). The forest covers 420 Km^2 and is close to the Indian Ocean in Kilifi County about 110 km north of Mombasa. It is one of the last remnant indigenous forests in Kenya, the largest and most intact coastal forest in East Africa, and by far the largest remnant of the forests that once dominated Kenya's coastal fringe. It contains a remarkably high number of species in relation to the area: 20% of Kenya's bird species and about 30% of its butterflies have been recorded in this small part (0.07%) of Kenya. At least 24 rare or endemic bird, mammal and butterfly species are restricted to this stretch of coast. This high proportion of endemic species, some known only from this forest, makes ASF a globally significant biodiversity hotspot. The forest has been designated by BirdLife International as an Important Biodiversity Area.

Plate 1: Participants' activities during the ASF elephant action planning workshop.
Photo by Paul Muoria

Today, ASF is believed to hold a population of over 150 African Elephants. High crop raiding levels led to the construction of an electric fence all around the forest despite the fact that the forest has no permanent water sources. This introduced ecological challenges for the management of ASF including limited access to water and habitat destruction. Furthermore, ASF ecosystem is threatened by over harvesting of resources by local communities owing to high poverty levels. In the wake of climate change, these challenges are likely to intensify.

This Action Plan was developed through a consultative stakeholders' workshop held at Gede Ruins Museum between 5th and 7th February 2013 attended by over 30 participants from various institutions (Plate 1, Annex 1). During this workshop various issues touching on the ASF Elephants, especially their current population status, threats and ecological challenges, were discussed through a series of formal presentations, moderated brain-storming, breakout group discussions and plenary sessions as well as field visits. This plan draws experience form the challenges and existing strategies for elephant conservation in Kenya (and the region), but addresses conservation challenges and proposes solutions that are specific to ASF ecosystems. Such a site specific action plan for elephants, designed to be implemented in a collaborative manner, is expected to be a considerably more effective way to address local conservation challenges as it involves and gives the local stakeholders an opportunity to make a contribution.

Figure 1: Map of Arabuko-Sokoke Forest and its location in Kenya



THE ACTION PLAN

VISION

A secure future for elephants and their habitats in ASF, Kilifi County based on peaceful and beneficial coexistence with people now and for generations to come

OVERALL GOAL

Maintain viable elephant population in ASF, enhancing connectivity of habitat and security of elephants while safeguarding against HEC and increasing value of elephants to people and habitats.

STRATEGIC OBJECTIVES

This action plan identifies eight strategic objectives based on the problem analysis for ASF elephants and in line with existing conservation and management strategy for elephants in Kenya. These objectives can be summarized as:

1. Protection;
2. Population Management;
3. Habitat Management and Connectivity;
4. Research and Monitoring;
5. Human Elephant Conflicts (HEC) Management;
6. Incentives;
7. Capacity Building;
8. Coordination and Support.

Each of these objectives and the actions necessary to achieve it are outlined below. Appendix 2 gives details on activity prioritization, timing, approximate annual budgets, indicators and relevant stakeholders

Strategic Objective 1 - Protection: Prevent elephant poaching by strengthening law enforcement measures and stakeholder collaboration.

Poaching is a serious problem in most parts of elephant range in Kenya. At ASF, only attempted elephant poaching has been reported. However, there is need to institute preventive measures to curb poaching of elephants in the forest and control poaching of other biodiversity including animal and plant species. The following activities will contribute to the protection of elephants and indeed the rich biodiversity heritage of Arabuko-Sokoke Forest:

- Harmonize KWS and KFS operations as per MoU and strengthen ASFMT

- Develop and implement consumptive resource (including firewood and indigenous plant material) utilization protocol
- Fence maintenance
- Adhere to management plan (esp. resource use zoning)
- Intensify surveillance patrols
- Strengthen community scouting
- Engagement of community policing, intelligence informer networks and county administration
- Strengthen legislation and law enforcement
- Initiate education and awareness programs for schools and general public on elephants & biodiversity conservation issues (ecosystem services, benefits, crimes etc)

Strategic Objective 2 - Population Management: Maintain a viable and ecologically sustainable elephant population in ASF.

Elephant population at ASF is estimated at between 150 and 180 but this has not been verified. Now that this population is completely fenced in the forest, it is important accurately establish the population size and monitor its growth in order to inform population and habitat management. It is also important to explore ways of managing the elephant population density, which is achievable by expansion of their range by working with local land owners to form conservancies. Additionally there will be need to engage Kilifi County Government to develop a tourism master plan. This strategic objective will be achieved through:

- Establishment of the carrying capacity of ASF for elephants
- Exploring the use of contraceptives to control population

Plate 2: Efforts to artificially supply water for elephants at ASF.The photo shows workshop participants standing around a water trough constructed for elephants at Arabuko swamp.
Photo by Paul Muoria

- Translocation of elephants if necessary
- Establishment of community conservancies
- Development of a tourism master-plan based on elephants and other biodiversity for Kilifi County

Strategic Objective 3 - Habitat Management and Connectivity: Ensure ecologically suitable habitat for ASF elephants.

Confinement of elephants in Arabuko Sokoke Forest can lead to massive vegetation destruction hence habitat degradation which may in turn have a cascading effect on the elephants themselves and other forms of biodiversity. This situation is worsened by lack of permanent water in the forest. Water is artificially provided to elephants at Arabuko Swamp during the dry season. However this has led disproportionate use of this area by elephant and vegetation destruction is already evident. At the same time the local human population surrounding the forest depends heavily on the forest for resources including firewood and herbal medicine. There is need to check the spread of invasive species, garbage dumping and explore connectivity to reduce pressure on the habitat. To ensure habitat connectivity, the following activities need t o be implemented:

- Monitor habitat destruction by Elephants ad human activities
- Develop and implement an invasive species management plan for Arabuko-Sokoke Forest
- Increase number of watering points e.g. wind mill run boreholes, water bowzers, access corridors
- Assess possibility of establishing corridors to enhance connectivity and access to water - through institutional and legal engagements
- Develop and implement protocols for monitoring resource extraction
- Assess availability of dead wood - firewood
- Stop garbage dumping in the ASF

Strategic Objective 4 - Research and Monitoring: Strengthen existing monitoring systems and conduct targeted research to provide information for adaptive management and protection of elephants and their habitats.

ASF is perhaps one of the most studied coastal forests in Kenya. Ecological monitoring programs have also been initiated by different stakeholders but coordination has not

been effective. Research in emerging issues such as climate change, emerging diseases, and invasive species will help natural resource managers in making informed decisions especially in this era of rapid industrialization and infrastructural development. To achieve this strategic objective, the following activities need to be implemented:

- Establish actual elephant population size at ASF and monitor population dynamics and trends
- Conduct feasibility study for establishing corridors to other preferred habitats and watering points
- Conduct genetic studies to assess possibilities of inbreeding
- Conduct EIAs for any development projects likely to affect the forest ecosystem
- Review all EIAs for development projects likely to affect the forest ecosystem
- Conduct Environmental Audits for existing projects
- Assess movement and preferred habitat types for elephants within ASF
- Map extent of invasive species within and around ASF
- Establish a fully equipped weather station at ASF
- Map land use and land use changes around ASF
- Coordinate all research and monitoring activities within ASF
- Establish a consolidated and centralize database for all research and monitoring activities within ASF
- Assess threats to species, habitats and ecosystem functions/services as result of elephants' activity/density - recognizing ASF as a critical closed ecosystem.
- Mainstream and implement IBA monitoring
- Monitor extractable resources
- Assess elephant disease prevalence and their impacts during stress conditions such as drought
- Investigate impacts of Climate Change on habitats and elephant population

Strategic Objective 5 - Human Elephant Conflicts (HEC): Enhance HEC mitigation by involving stakeholders at all levels using appropriate site-specific approaches.

Ring fencing of ASF has eliminated the problem of crop raiding by elephants on adjacent farms but crop raiding by other wild animals particularly primates still persists. In addition, HEC can still take place in case of fence breakdown or if corridors connecting Arabuko Sokoke Forest to other habitats are established. Other developments can also increase the levels of Human wildlife conflicts. The following activities need to be implemented to check on human wildlife conflicts:

- Fence maintenance
- Initiate process for establishing community conservancies in appropriate areas – seeking community and political support
- Increase number of watering points
- Translocation of problem animals
- Sensitize communities and County Government on Elephant conservation challenges and benefits
- Ensure EIAs, audits and reviews on development projects within and around ASF
- Harmonize and standardize HEC data collection protocols and centralize reporting database system implemented by stakeholders.

Strategic Objective 6 - Incentives: Provide benefits that will encourage landowners and local communities to tolerate, protect and accommodate elephants.

Elephants and other biodiversity in ASF and other areas of Kilifi County are a treasure which, if well protected, can uplift the economy of the entire County. It is therefore important to incentivize the local community around ASF in order to win their support. This will be achieved through the following activities:

- Initiate Corporate Social Responsibility (CSR) activities around ASF
- Develop ecotourism facilities on private and community owned land adjacent to ASF
- Offer job opportunities to local communities
- Develop local capacity for ecotourism
- Explore livelihood diversification options and support their implementation

- Establish woodlots on private farms to reduce pressure on forest
- Improve energy saving technologies
- Ensure well maintained roads
- Promote and develop viable nature-based IGAs that support the conservation of ASF
- Review and adopt national policy on compensation mechanisms and consolation schemes for elephant related damages.
- Establish agreements and public-private-partnership (PPP) with investors, donors, and conservation NGOs to provide technical and financial support to community conservancies and eco-tourism venture (& co-management)
- Assess potential of carbon credit (REDD) and incipient biodiversity credit markets to generate funds for elephant conservation.

Strategic Objective 7 - Capacity Building: Sustain an effective resource capacity through collaborative efforts among stakeholders in ASF.

Successful implementation of this strategy demands that measures be put in place to ensure that the implementing agencies and other key supporters including civil societies and local communities have the necessary skills and resources. This will be achieved through:

- Conducting staff capacity (incl. equipment) needs assessment and training for KWS, KFS staff and other key players
- Mobilizing resources to implement and deliver the plan

Strategic Objective 8 - Coordination and Support: Implement an effective coordination framework to support stakeholders and enhance decision making and action for stakeholder decision and actions

Arabuko –Sokoke Forest is managed by Arabuko Sokoke Forest Management Team (ASFMT) which brings together four Government Departments work in partnership at ASF: Kenya Forest Service (KFS), Kenya Wildlife Service (KWS), Kenya Forestry Research Institute (KEFRI), and National Museums of Kenya (NMK). These four government agencies will work together with local community representatives and with local and international NGOS to implement this strategy. Each of the government agencies will focus on its mandate. KWS, being responsible for wildlife conservation in Kenya, will lead on issues touching directly on elephants ensuring that this action plan is in line with the national elephant conservation strategy. The Elephant Program Office at

KWS headquarters will provide oversight and technical support particularly on research and policy issues. ASFMT will also work closely with Coast Area Elephant Management Committee to ensure regional considerations and with Kilifi County government to ensure political good will and relevance to the local economy. To ensure proper coordination for successful implementation of this strategy, the following activities need to be carried out:

- Strengthen ASFMT's role and participation in the Coastal Area Elephant Management Committee (EMC)
- Develop and implement a communication and information sharing strategy for stakeholders
- Develop and implement elephant conservation awareness programs targeting schools, local community, policy makers/ County Government, CEC, NGOs, business/tourism sector,
- Engage media in awareness creation and policy interpretation
- Harmonize KWS and KFS operations as per MoU
- Produce and share ASF elephant status data with stakeholders, producing relevant and timely articles in journals and the media
- Encourage and support improved capacity and increased activity of NEMA in controlling the environmental impact of development activities that may affect ASF elephant population
- Conduct annual review of progress in implementation of the plan (M & E)
- Identify and ensure funding required for all essential activities for the year is available from the start of the financial year

APPENDIX 1: List of Participants during the Workshop held at Gede Ruins (5th to 7th February 2013)

	NAMES	ORGANIZATION
1	Isaac W. Mugo	KWS
2	Lucy Makosi	KWS
3	John Were	KWS
4	Lynn Njuguna	KWS
5	Shadrack Ngene	KWS
6	Judith Mbau	NMK
7	Odera George Joshua	NK
8	Kimutai David	KWS
9	Jacquiline Benard	KWS
10	Steve Curtis	AQUA VENTURES
11	Sammy. S. Elijah	LOT/WTW
12	Samuel Andanje	KWS
13	David C. Ngala	FOASF
14	Werner Schroeder	NABU
15	Christopher .M. Maina	KFS-KILIFI
16	C. M Wamola	KFS MALINDI
17	Julius K. Kadenge	CFA. SOKOKE
18	Charo Ngumbao	CFA GEDE
19	Alex Baya	JILORE CFA
20	Francis Kangema	NK
21	Chamuku Wekesa	KEFRI-COAST
22	Mohamed sheikh	KEFRI –GEDE
23	Arafa Salim (HS C)	NK
24	Mohamed Bakari	KWS- MALINDI
25	Paul Muoria	NK
26	Severinus Jembe	NMK/KIPEPEO
27	Blessingtone C. Maghaya	KFS
28	Mwagasambi G. Said	KFS
29	Jilloh M. Deacom	KFS
30	Johana .M. Musu	KFS
31	Ronald Mulwa	NMK
32	Sudi Ramadhani	KFS
33	Paul Matiku	NK

APPENDIX 2: The Activity Table for Arabuko-Sokoke Forest Elephants Conservation Action Plan

Appendix 2: The Activity table for Arabuko-Sokoke Forest Elephants Conservation Action Plan

Key to some information in the activity table:
Priority level: low (*), medium (**), high (***) or critical (****)
Agencies responsible - lead institution is written in bold

Project	*Activity*	*Overall priority*	Time line	Approx. annual budget (Million Ksh)	Institution/Player	Indicators
1. Protection	1.1 Harmonize KWS and KFS operations as per MoU and strengthen ASFMT	****	Quarterly meetings	0.2	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), NEMA, County Government	No. of ASFMT meetings, minutes of meetings, No. of joint activities, Existence of operational MOU
	1.2 Joint monitoring of resource utilization (firewood, medicinal plants) at ASF	***	Continuous	0.5	**ASFMT** (KFS, KEFRI, KWS, CFAs)	Presence of dead wood dependent species, e.g. East coast Akalat, Monitoring reports
	1.3 Fence maintenance	****	Continuous	1	**KWS**, CFAs, KFS, KEFRI, FoASF,	Fence status, crop raiding records,
	1.4 Adhere to management plan (esp. resource use zoning)	****	Continuous	-	**ASFMT**	Strategic management plan evaluation
	1.5 Intensify surveillance patrols	****	Continuous	4	**KWS,** KFS, ASFMT,	Patrol Data e.g. MIST Patrol reports
	1.6 Strengthen community scouting	****	Continuous	2	**CFAs**, FoASF, KWS, KFS	Incident reports
	1.7 Engagement of community policing, intelligence informer networks and county administration	****	Continuous	2	**CFAs**, FoASF, KWS, KFS	Incident reports
	1.8 Strengthen legislation and law enforcement	****	Continuous	1	ASFMT (**KFS**, KEFRI, **KWS**, CFAs), County Government,	No. of arrests, No. of cases prosecuted
	1.9 Initiate education and awareness programs for schools and general public on elephants & biodiversity conservation issues (ecosystem services, benefits, crimes etc)	****	Continuous	1	**ASFMT** - CFAs, FoASF, KWS, KFS, STE	No. of awareness events/activities, No. of people reached
	1.10 Regulate extraction of indigenous plant material and IK	***	Continuous	1	**KWS,** KFS, KEFRI, CFAs, NMK, NK	MTAs, no of licensed research projects, IBAs status reports, Ecological monitoring report, patrol reports, No. of arrests
2. Population Management	2.1 Establish the carrying capacity of ASF for elephants	****	2014	3	**KWS,** NMK, KFS, CFAs, KEFRI Nature Kenya, Universities (National and international),	IBA status reports, Thesis, report, CC determined, database
	2.2 Experiment contraceptives to control population	**	2014/2015	5	**KWS,** Universities	Reports, publications
	2.3 Translocation of elephants	**	After 2016		**KWS**, CFAS, ASFMT, STE, County Government,	Reports
	2.4 Establishment of community conservancies	****	Continuous	3	**KWS**, CFAS, ASFMT, STE, County Government	No. and acreage established
	2.5 Develop a tourism master-plan based on Elephants and other biodiversity for Kilifi County	****	2013	3	**KWS, KFS**, ASFMT, CFAS, Nature Kenya, NMK, KTB, County Government	Master plan developed
3. Habitat management and connectivity	3.1 Monitor habitat destruction by Elephants	****	Immediate then Continuous	1	KFS, KEFRI, **KWS,** CFAs, NMK, NK + SSG, A Rocha Kenya, ASFAGA	Reports
	3.2 Monitor habitat destruction by human activities	***	Continuous	0.5	**KFS**, KEFRI, **KWS**, CFAs, NK + SSG, A Rocha Kenya, ASFAGA	Reports, No. of arrests
	3.3 Increase number of watering points e.g. wind mill run boreholes, water bowzers, access corridors	****	2014	5	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), NEMA, County government	Reports, No. of watering points, No. of corridors established, watering points assessment reports

	3.4 Assess possibility of establishing corridors to enhance connectivity and access to water – through institutional and legal engagements	****	Immediate (2013)	1	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), NEMA, County Government, Land commission, STE	Report
	3.5 Develop and implement a invasive species management plan	****	Immediate	0.5	**KWS,** KFS, **KEFRI,** CFAs, ASFMT	IAPS plan completed, Control activities, Reports
	3.6 Develop and implement protocols for monitoring resource extraction	***	Immediate	0.2	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), NEMA, County Government	Protocols developed and adhered to
	3.7 Assess availability of dead wood – firewood	****	Immediate	0.2	**KFS,** KEFRI, KWS, CFAs	Reports,
	3.8 Stop garbage dumping in the ASF	**	Continuous	0.1	**KFS**, KEFRI, **KWS**, CFAs, **NEMA**	Clean up reports, status reports, arrest cases
4. Research & monitoring for management	4.1 Establish actual elephant population size at ASF and monitor population dynamics and trends	****	Baseline by end of June, 2013 Then every 3 years	1	**KWS**, KFS, Nature Kenya, local community, NMK, A Rocha Kenya	Database established, Status reports
	4.2 Conduct feasibility study for establishing corridors to other preferred habitats and watering points	****	Immediate	1	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), NEMA, County Government	Reports
	4.3 Conduct genetic studies to assess possibilities of inbreeding	***	2014/2015	2	**KWS**, Universities, NMK,	Report, publications
	4.4 Conduct EIAs for any development projects likely to affect the forest ecosystem	***	Continuous - as needed	-	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), **NEMA**, County Government	No. of EIA reports reviewed/audits
	4.5 Review all EIAs for development projects likely to affect the forest ecosystem	***	Immediate	-	**NEMA**, **ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), County Government	EIAs reviewed
	4.6 Assess movement and preferred habitat types for elephants within ASF	****	2014/2015	1	**KWS,** Universities, NMK,	Status Reports, Publications
	4.7 Map extent of invasive species within and around ASF	****	2014/2015	2	KWS, **KEFRI,** KFS, Universities, NMK	Status Reports, Publications
	4.8 Establish a fully equipped weather station at ASF	***	Immediate, then continuous	0.5	**ASFMT**, KFS, KWS, ASFGA, KEFRI	Data
	4.9 Map land use and land use changes around ASF	***	Immediate, then continuous	0.5	**ASFMT,** CFAs, Universities, County Government,	Land use maps
	4.10 Coordinate all research and monitoring activities within ASF	****	Initiate immediately, then continuous	0.5	**ASFMT,** Universities, NEMA, County Government	Databases of projects, Research proposals and monitoring activities and protocols
	4.11 Establish a consolidated and centralize database for all research and monitoring activities within ASF	****	Immediate	0.5	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), NEMA, County Government	Central accessible depository database
	4.12 Assess threats to species, habitats and ecosystem functions/services as result of elephants' activity/density - recognizing ASF as a critical closed ecosystem.	****	continuous	0.5	**ASFMT**, Universities, County Government	Publications, reports
	4.13 Mainstream and implement IBA monitoring	****	annual	0.1	**KFS, KWS, NK,** FoASF	IBA annual Status and Trends reports,
	4.14 Monitor extractable resources	****	Continuous	0.5	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), County Government	Reports

	4.15 Assess elephant disease prevalence and their impacts during stress conditions such as drought	**	Continuous	0.2	**KWS,** ASFMT	Vet reports
	4.16 Investigate impacts of Climate Change on habitats and elephant population	***	Continuous	0.5	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), NEMA, County Government, **universities**	Research Publications, status reports
5. Human Elephant Conflict (HEC)	5.1 Fence maintenance	****	Continuous	0.2	**KWS,** CFAs, KFS, KEFRI, FOASF,	Fence status, crop raiding records,
	5.2 Initiate process for establishing community conservancies in appropriate areas – seeking community and political support	***	After 2014	1	**ASFMT**, County Government, NEMA, FoASF, KTB	Minutes/meetings,
	5.3 Increase number of watering points	****	Continuous	1	**ASFMT**	No. of watering points
	5.4 Translocation of problem animals	**	After 2016		**KWS,** CFAs, County Government, ASFMT, STE	Translocation Reports
	5.5 Sensitize communities and County Government on Elephant conservation challenges and benefits	****	Continuous	0.5	**ASFMT,** CFAs, County Government	Public awareness meetings, publicity material produces, press releases
	5.6 Ensure EIAs, audits and reviews on development projects within and around ASF	***	Continuous - as needed	-	ASFMT, **NEMA**, County Government	No. of EIA reports reviewed/audits
	5.7 Harmonize and standardize HEC data collection protocols and centralize reporting database system implemented by stakeholders.	****	Continuous	0.5	**ASFMT** (**KWS**, CFAs, KFS, FoASF)	Reports, central database in place
6. Incentives	6.1 Ensure CSR activities around ASF	***	Continuous	1	KWS, KFS, KEFRI, **ASFMT**, CFAs	No. of projects
	6.2 Develop ecotourism facilities on private and community owned land adjacent to ASF	***	Continuous	2	**ASFMT** (KWS, KFS, CFAs, FoASF), KTB, County Government,	No. of facilities
	6.3 Offer fence attendant jobs to local people	**	Continuous	0.2	**KWS,** KFS, CFAs	No. of local people employed
	6.4 Develop local capacity for ecotourism	**	Continuous	0.5	**ASFMT**, NK,	No. trained
	6.5 Explore livelihood diversification options and support their implementation	****	Continuous	1	**ASFMT**	No. of sustainable IGAs
	6.6 Establish woodlots on private farms to reduce pressure on forest	****	Continuous	1	CFAs, Farmers, **KFRI**, KFS	Acreage under woodlots
	6.7 Improve energy saving technologies	****	Continuous	1	**ASFMT**, Community, KFS, **KARI**, Wild living, County Government,	No. households adopting the technologies
	6.8 Ensure well maintained roads	****	Continuous	2	KWS, KFS, AsfAGA, CFAs	Motorable roads
	6.9 Promote and develop viable nature-based IGAs that support the conservation of ASF	****	Continuous	1	**ASFMT,** Farmers, CFAs, County Government	No. of sustainable NBEs & IGAs
	6.10 Review and adopt national policy on compensation mechanisms and consolation schemes for elephant related damages.	***	Continuous	0.1	ASFMT (**KWS**, KFS)	Number of cases, Reports
	6.11 Establish agreements and public-private-partnership (PPP) with investors, donors, and conservation NGOs to provide technical and financial support to community conservancies and eco-tourism venture (& co-management)	****	Continuous	0.1	**ASFMT**, County Government, CFAs, Nature Kenya, KTB	No. of PPPs established

	6.12 Assess potential of carbon credit (REDD) and incipient biodiversity credit markets to generate funds for elephant conservation.	***	Continuous	0.5	**ASFMT**, County Government, CFAs, Nature Kenya,	Amount of funds raised, No. of PES programs initiated
7. Capacity	7.1 Conduct staff training and capacity (incl. equipment) needs assessment for KWS, KFS staff and other key players	***	Continuous	0.5	**ASFMT**	No. of targeted trainings conducted,
	7.2 Mobilize resources to implement and deliver the plan	****	Continuous	-	A**SFMT**, County Government, CFAs, Nature Kenya,	No. of program activities implemented
8. Coordination and support for stakeholder decision and actions	8.1 Strengthen ASFMT's role and participation in the Coastal Area Elephant Management Committee (EMC)	****	Continuous	0.4	**ASFMT**, County Government, CFAs,	No. of ASFMT meetings, minutes of meetings, local EMC events,
	8.2 Develop and implement a communication and information sharing strategy for stakeholders	****	Immediate	0.1	**ASFMT**	Communication and information sharing strategy developed
	8.3 Develop and implement elephant conservation awareness programs targeting schools, local community, policy makers/ County Government, DEC, NGOs, business/tourism sector,	****	Continuous	0.5	**ASFMT –** KWS, KFS	Annual awareness events, schedules, functions calendar
	8.4 Engage media in awareness creation and policy interpretation	****	Continuous	0.5	**ASFMT –** KWS, KFS	Press releases, media reports/sessions/adverts
	8.5 Harmonize KWS and KFS operations as per MoU	****	Quarterly meetings	0.2	ASFMT (**KFS**, KEFRI, **KWS**, CFAs, NMK, NK, A Rocha Kenya), NEMA, County Government	No. of joint activities, Existence of operational MOU
	8.6 Produce and share ASF elephant status data with stakeholders, producing relevant and timely articles in journals and the media	****	Quarterly	0.2	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), NEMA, County Government	Reports, articles, media coverage,
	8.7 Encourage and support improved capacity and increased activity of NEMA in controlling the environmental impact of development activities that may affect ASF elephant population	****	Continuous	-	**ASFMT**,NEMA, County Government	No. of EIAs touching on elephants appropriately conducted and adhered to
	8.8 Conduct annual review of progress in implementation of the plan (M & E)	****	Annually	0.2	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), NEMA, County Government	Annual reviews scheduled and adhered to
	8.9 Identify and ensure funding required for all essential activities for the year is available from the start of the financial year	****	Quarterly budget reviews	0.2	**ASFMT** (KFS, KEFRI, KWS, CFAs, NMK, NK, A Rocha Kenya), NEMA, County Government	Yearly priority activities identifies and funds sourced/budget allocated