Sophie Harrison

NRT-COAST VISION 2018 - 2022

NRT
NORTHERN RANGELANDS TRUST

CHAPTER 1

VISION

Imagine in 10 years, a North-Kenya coastal landscape covering half a million hectares, where wildlife is thriving, the unique and pristine coastal forests and mangroves are protected, productive coral reef ecosystems support a vibrant fisheries economy, and local people are benefiting economically and socially from stability and investment in their region. This is NRT's vision for its member community conservancies in the Lamu, Garissa and Tana River Counties of northeastern Kenya.

NRT-Coast has seven member conservancies in this region, in a landscape that is an important biodiversity hotspot with dozens[1] of globally endangered animals and plants, one of the most intact forest ecosystems still remaining in East Africa, 60% of Kenya's mangroves, as well as coastal wetlands, coral reefs and beaches. Despite its biodiversity importance, this region has received little conservation investment and the role of local communities in managing and protecting these resources has been overlooked.

Community conservancies are relatively new to this region, the first having been established by NRT in 2007. Significant and long-term investment into these conservancies, however, has been difficult to secure largely due to insecurity, which has plagued the region for decades and has been heightened since 2011 due to its proximity to Somalia. However, NRT is committed to supporting and developing these conservancies as a proven approach to bringing peace and stability, good conservation, economic and social development that has been demonstrated elsewhere in Kenya. NRT-Coast focuses on the following goals:

1. Governance of conservancies & peace
2. Livelihood development
3. Natural resources & wildlife
4. Enterprise development
5. Sustainable conservancies

In the long-term, the success of these community conservancies will help to secure a globally important biodiversity hotspot which is facing imminent threats from large-scale infrastructure developments including the proposed Lamu Port-South Sudan-Ethiopia-Transport (LAPSSET) Corridor, the proposed Lamu coal plant, emerging oil and gas exploration as well as agricultural expansion, poaching and illegal land acquisitions.

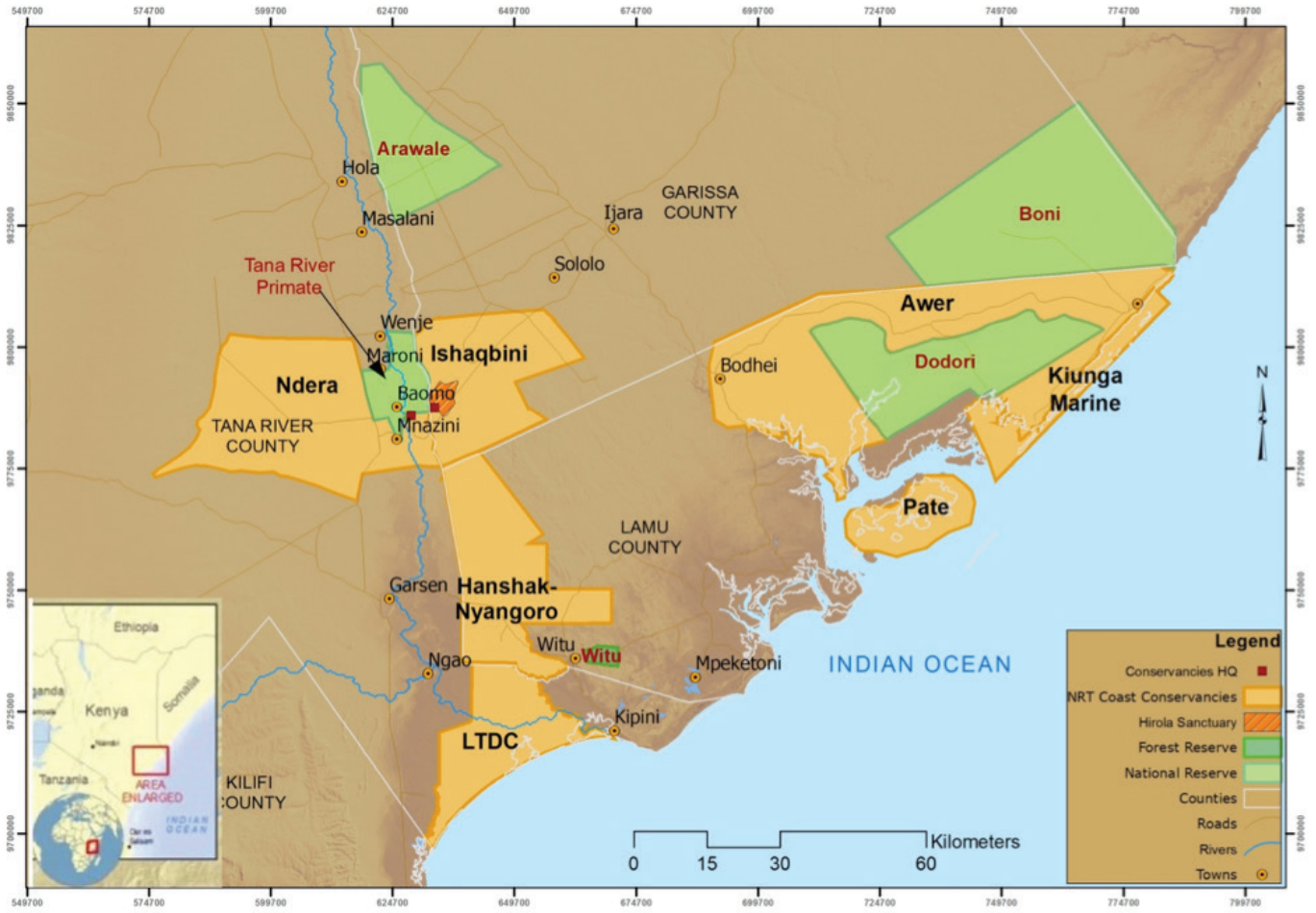

Michael Gunther


Mike Pflanz

Conservancies will also provide an opportunity for economic and social development for their communities in a region which has been historically marginalized and faces chronic insecurity, and where there are few options for livelihood improvements. In order to achieve NRT's vision for its member conservancies, which **build resilient communities that are better able to cope with an uncertain future of droughts, economic shocks and political change, by strengthening governance and social development, diversifying economies, improving management of natural resources and wildlife, and building peace and stability,** significant long-term investment and partnerships are needed. An estimated USD 2.5 million per year is required over the next 5-years to support this vision.

[1] The Boni/Dodori forest complex and adjoining grassland and wetland habitats have been poorly studied, some rare and endangered species have been listed however exact figures are not known.

Figure 1: Map of the 7 Community Conservancies in the NRT-Coast landscape and adjacent protected areas



CHAPTER 2

THE NRT-COAST LANDSCAPE

2.1 - Biodiversity Context

The NRT-Coast landscape covers parts of Lamu, Tana River and Garissa Counties. It includes the northern part of the East African Coastal Forest complex, an area considered one of the world's top 25 biodiversity hotspots. The landscape includes the indigenous dry coastal forests, adjacent forest-grassland mosaic, wetlands, estuaries and coastal swamps, mangroves, beaches and coral reef ecosystems; diverse and vast habitats that continue to support high numbers of wildlife, birds and marine animals. Formally protected areas include the Boni and Dodori National Reserves, the Tana River Primate Reserve, Witu Forest Reserve and the Kiunga Marine National Reserve, a combined area of approximately 268,000 ha. Additionally, the area contains the 163,600 ha Tana Delta, which is the second most important estuarine and deltaic ecosystem in Eastern Africa and a globally designated Important Bird Area (IBA). In 2015 the Boni/Dodori forest was also designated as an IBA.

Despite the global recognition of this region as a biodiversity hotspot and the gazettement of the Reserves in the 1970s, there has been relatively little conservation investment and little active management by either government or non-government agencies. The Reserves continue to be used by traditional communities, many of whom reside within their boundaries, for fishing, farming and livestock grazing without formal engagement of these communities in the conservation and sustainable management of natural resources.

Due to its remoteness and long-term insecurity of the area, the Boni-Dodori forest system has been little studied and there have been no in-depth biodiversity

assessments. Recent camera-trapping surveys for mammals and bird surveys have been carried out on the fringes of these forests and the most recent botanical survey was carried out for only nine days almost 20 years ago.

These forests are defined as dry coastal forest and are some of the largest intact and relatively undisturbed forests remaining in Kenya. Habitats include a mosaic of forest, thickets, grasslands and wetlands. The forest and adjacent forest-grassland mosaic contains numerous indigenous, endemic and threatened plant species rarely found in other forests. The common tree species include: *Homalium abdessamadii, Croton spp., Excoecaria bussei* and Cycads (*Encephalartos hildebrandtii*). Hardwoods are targeted for their timber for building, furniture and boat building as well as charcoal and include Mbambakofi (*Afzelia quanzensis*), African blackwood (*Dalbergia malanoxylon*), Muhugu (*Brachystegia huilliensi*), Mgurure (*Combretum schumanii*), and *Newtonia erlangeri*. These forests are a globally important area for forest antelopes and the global centre for the critically endangered Ader's duiker (*Cephalophus adersi*).

The Boni-Dodori forest system and adjacent forest-grassland mosaic is of major importance to mammal conservation, with indications that it remains relatively undisturbed, holding complete and fully functioning communities of predators and herbivores including endangered species; elephant (*Loxodonta africana*) and African wild dog (*Lycaon pictus*). However, elephants have been reduced to very low numbers as a result of ivory poaching over several decades.

In 2012/13, 184 species of birds were recorded including two near-threatened species, the Southern Banded Snake Eagle (*Circaetus fasciolatus*) and Fischer's Turaco (*Tauraco fischeri*). The surveys confirmed the importance of the Boni-Dodori system to global and regional avian diversity including Palaearctic and European migrant birds and East African coastal biome bird species.

Much of the landscape beyond these forests includes open-forest-savannah mozaic, Acacia Commiphora bushland, characteristic grassland areas with doum-palms (*Hyphaene spp.*), and wetlands. Recent aerial surveys of Lamu and southern Garissa Counties, showed this region holds the highest density of Reticulated giraffe (*Giraffa reticulata*), coastal topi (*Damaliscus korrigum*) and buffalo (*Syncerus caffer*) in Kenya as well as being home to most of the world's remaining critically endangered Hirola antelope (Beatragus hunteri) whose global population is estimated at 400-500 individuals.


Juliet King

The Tana Primate Reserve has long been recognized as an important area for primate biodiversity. The reserve covers 17,000 ha on the east and west banks of the Tana River and is home to the critically endangered Tana River Red Colobus (*Piliocolobus rufomitratus*) and Tana Managabey (*Cercocebus galeritus*) as well as numerous other primates. These endangered primates exist in only a few small, fragmented forest patches along a 60km stretch of the Tana River, and occur nowhere else in the world. Their populations are estimated at between 1-2,000 individuals only.

The Reserve includes discontinuous patches of gallery forest characterized by trees such as Figs (*Ficus spp.*), Phoenix palms (*Phoenix reticulate*), *Acacia robusta, Blighia unijugata* (Mwikuni), *Sorindeia madagascariensis*, African ebony (*Diospyros mespiliformis*) and *Mimusops obtusifolia* (Mugambo-kapee). These forests are dependent on ground water supplied by the river, which decreases sharply with increasing distance from the river creating a narrow strip of riverine forest that transitions into wooded grassland or *Acacia Commiphora* bushland.

Witu Forest Reserve, small forest reserve of approximately 4,600 ha managed by the Kenya Forest Service. Habitat is characterized by large trees of Combretum schumanii (Mgurure), Milicia excelsa (Mvule) and Terminalia sambesiaca plus the only population of Euphorbia tanaensis and only known Kenya population of Camptolepis remiflora and Mezoneuron angolense. The reserve forms part of a continuous ecosystem providing habitat for wildlife that moves across the landscape, as well as forest-dependent antelope species.

The Tana Delta is a globally important wetland area covering 163,600 hectares, recognized as an Important Bird Area (IBA) and declared a Ramsar site in 2012 (under the Ramsar Convention on Wetlands of

International Importance), it is a vast estuarine and deltaic ecosystem that includes freshwater, floodplain, estuarine and coastal habitats. The wetland has extensive and diverse mangrove systems, marine brackish and freshwater intertidal areas, pristine beaches and shallow marine areas. This diversity of habitats supports a rich biodiversity of freshwater, marine and terrestrial species. Most of the area is seasonally flooded grassland, which host large herds of livestock during the dry season. Over 600 plant species have been identified, including the endangered *Cynometra lukei* and *Gonatopus marattioides*. The wetlands at times hold exceptional concentrations of waterbirds and are a critical area for birds migrating between West Asia and Eastern Africa.

The Tana Delta – Kiunga coastline includes diverse and contiguous habitats of mangroves, beaches and dunes, coral reefs and deep waters of the offshore North Kenya Bank, which is probably the most valuable offshore fishery in Kenya. The 35,000 ha of mangroves includes the nine mangrove species found in the Western Indian Ocean: *Avicennia marina, Ceriops tagal, Bruguiera gymnorrhiza, Rhizophora mucronata, Lumnitzera racemosa, Sonneratia alba, Xylocarpus granatum, Xylocarpus, molucensis* and the rare *Heritiera littoralis*. Mangroves in the Tana Delta-Kiunga are known to be superior in terms of biomass, height and basal areas. The Lamu archipelago mangroves alone constitute over 60% of Kenya's mangroves, one of the largest stands of mangrove forests in East Africa. These mangroves combined with the nutrient rich colder waters are highly productive and support some of the highest densities of fin-fish and crustaceans inshore in Kenya. The coral reef system which occurs at the convergence of the East Africa Coastal current and the Somali current, bring a unique mix of coral and fish species which combine Arabian Gulf with East African species, including rare and endemic corals not seen elsewhere in East Africa, *Horastrea indica* and *Siderastrea savignyana*. The endangered Napoleon wrasse, *Cheilinus undulates*, critically endangered sawfish *Anoxypristis cuspidata* (knifetooth sawfish) and *Pristis zijron* (longcomb sawfish), and several species of small coastal sharks are also found in the area.

Five species of sea-turtles (all classified as endangered or critically endangered) occur in Kenya's waters. Three species are known to nest on beaches along this coast; green turtles (*Chelonia mydas*), hawksbill turtles (*Eretmochelys imbricate*) and olive ridley turtles (*Lepidochelys olivacea*) while Loggerhead (*Caretta caretta*), and Leatherback (*Dermochelys coriacea*) turtles forage and migrate through the area. The most common species nesting on beaches in northern coastal Kenya are green turtles, with occasional or very rare nesting by hawskbill and olive ridley turtles. Most nesting occurs between March to September with a peak in April to June during the rainy southeast monsoon season.

Dugongs (*Dugong dugon*) occur in the area, one of the last remaining populations in East Africa, although in very low numbers with possibly even fewer than 10 individuals. NRT-Coast continues to receive reports of occasional sightings and by rangers and fishermen, signs of feeding trails, or occasional reports of dead dugongs caught in nets as by-catch. Dugongs are one of the most threatened mammals on the African continent.

The varied ecosystems across this vast landscape support unique biodiversity, one of the 25 most important biodiversity areas on the plant, but which is still very poorly known. Securing and protecting these habitats and the species they support needs to be a local, National and Global conservation priority.

2.2 - Socio-Economic Context

The main cultural groupings in this landscape include: Somali (Abdulla and Wardei) and Orma people who are semi-nomadic pastoralists; Pokomo living along the Tana River and the Tana Delta farming in the more fertile riverine floodplains; Bajuni fishermen along the coast who also practice some subsistence agriculture, and the Boni community who are few in number and live mainly in settlements along the edge of the forest carrying out slash-and-burn agriculture. Immigration of people from elsewhere in Kenya into Lamu County has occurred over several decades with land purchase schemes set up by the Government as early as 1977. Most immigrants moved into the

area to take up farming and fishing. Land rights, land ownership and squatter occupation continue to be a major challenge in Lamu County, compounded by the potential impacts of national development projects such as LAPSSET and the proposed Lamu coal plant. Livelihoods of the local people are largely dependent on their natural resources; there is little opportunity for paid employment across the region. The relative remoteness of this area, many of the roads are impassable during the rains, together with chronic insecurity that has plagued the area for decades due to the region's proximity to Somalia, has meant little investment in development.

Access to fresh water is a major challenge across the region with many settlements dependent on water being transported in by truck or boat during the dry season; the 2016/17 drought combined with insecurity left many villages without any water at all. Access to education and health care is a challenge in most areas other than a few larger settlements. In areas most affected by insecurity, particularly the Boni/Dodori forest, provision of health care and education is almost non-existent; teachers left the area in 2014 and schools have been closed since then, and the only medical support is provided periodically by a small NGO working in the area. The poverty index (% of people living below the poverty line) is 32% in Lamu, 59% in Garissa and 76% in Tana River County. Education levels are lowest in Garissa and Tana River Counties; education levels in all 3 Counties fall in the bottom 10 in Kenya. Seventy four percent of the population in Garissa and 56% of people in Tana River County have no formal education; with only 5.9% of people in Garissa and 6.7% of people in Tana River Counties having completed secondary education. Education levels are slightly higher in Lamu County.

The poor road infrastructure and high cost of transport means most communities are unable to get their agriculture and fisheries products to markets resulting in low prices and at times excess produce, much of which goes to waste with no storage or processing facilities in the area. Livestock marketing is complex in this region; many primary village livestock markets have collapsed in recent years and insecurity hampers access to markets. However, cross-border livestock trade (particularly of cattle) between Somalia and Kenya is prolific and continues despite the insecurity; most livestock are destined for the major livestock markets in Garissa, Mombasa and Nairobi and provides the bulk of Kenya's urban meat consumption. Increasingly the more fertile grasslands in parts of Lamu and Tana River Counties are being utilized by large herds of livestock originating from Garissa and Somalia, causing conflict with resident communities.

2.3 - Threats

2.3.1 - Security

Instability and insecurity is the greatest impediment to social and economic development, and the ability of communities and government agencies to manage and protect the natural resources of this region. Insecurity in Lamu, Tana Delta and Garissa counties is linked to the spill-over conflict from neighboring Somalia that has gone on for decades, as well as conflict over land tenure and property rights. This is exacerbated by uneven socioeconomic development and marginalization of the region by the State. High levels of poverty, unemployment and a sense of neglect has enabled jihadist ideology from Al-Shabaab and involvement of youth in armed militias to gain ground. In this space, many donors and development agencies are fearful of investing their resources, which perpetuates the development vacuum.

Inter-ethnic conflict, particularly in the Tana River region, is often politically inflamed and serves as a further constraint to development. An added dimension is the occupation of parts of the Boni/Dodori reserves by government security forces; this has put added pressure on the communities of Awer and Kiunga, restricting their freedom of movement and adversely affecting livelihoods. Mistrust between local communities and security forces is a hindrance to establishing effective intelligence networks in the region. Addressing the local grassroots issues of socioeconomic marginalization are seen as key to responding to insecurity and instability in the region.

2.3.2 - Land Conflict

Land-rights and land-tenure continue to be an issue in Lamu County in particular and this is inflamed by the presence of squatters and potential impact of large-scale national development projects. The recently enacted Community Land Act 2016 provides an opportunity for communities to secure ownership of their traditional land and the resources therein. However, the voice of communities has been marginalized in this region in the past, traditional ownership not always recognized and corruption and land-grabbing has been commonplace; there is the potential for conflict to arise over boundary disputes in some areas.

2.3.3 - Inequitable Development

Little economic investment into the region has also meant few employment opportunities for local people or diversification of livelihoods. Poor market

infrastructure for agriculture and fisheries products is a major constraint to livelihood improvement. Lack of alternatives and high levels of poverty are putting increasing pressure on natural resources and is a barrier to their sustainable use and conservation. Lack of access to fresh water, education and health services perpetuates the cycle of poverty. Coupled with high population growth as well as an influx of immigrant workers from outside the region, the pressure on natural resources is rapidly increasing.

Several large-scale development projects driven by National Government including the Lamu Port-South Sudan-Ethiopia-Transport (LAPSSET) Corridor Project and the proposed Lamu Coal Plant pose a threat to the environment and livelihoods of people if not carefully mitigated. As mentioned previously, the potential influx of migrant workers and the opening up of areas that were previously inaccessible will place additional pressure on natural resources and will need to be considered. Disruption of access and rights to land by local communities, displaced by large-scale development projects may also occur. Dredging of the seabed to create the Lamu Port has started and already the impacts on coral reefs and marine life nearby are being seen with the likely loss of important fishing grounds. The proposed Coal Plant in the vicinity of Lamu is likely to have serious consequences to the immediate natural environment both marine and terrestrial, as well as a significant health impact to people through pollution. While such development projects need to go ahead for the benefit of the nation it is crucial that the potential environmental and livelihood impacts are mitigated and local communities are empowered to have a voice over these issues.

2.3.4 - Illegal Logging & Clearing of Forests

Specific threats to the forests of the NRT-Coast landscape are primarily illegal logging of timber for building, especially hardwoods and mangroves; agricultural expansion and illegal settlements, resulting in clearing of forests and unsustainable farming practices such as slash and burn. Traditional use of forest products is also becoming unsustainable as a result of increasing human-populations and erosion of traditional values and customs governing forest-use.

The changing flood dynamics of the Tana river, due to upstream dams and irrigation projects, is also threatening the regeneration and maintenance of the riverine forests upon which two critically endangered primate species depend, the Tana Mangabey and Tana River Red Colobus. The lack of capacity of the Kenya Forest Service and lack of clarity on the roles of different agencies in the management of forests and issuance of permits provides a loophole that is exploited by local communities and traders; this is especially the case for mangroves. Clearing of mangroves for development in coastal areas is increasingly becoming a concern.

2.3.5 - Poaching

Wildlife populations are under threat from poaching for both game meat and trophies (ivory). Bush-meat traditionally formed a major part of the protein consumption for several communities in this area. Historically, subsistence bush-meat poaching would not have been a major threat to wildlife due to the relatively low human densities. However, the increasing human populations, influx of migrant workers and the shift to commercialized bush-meat trade supplying both local centers and markets as far away as Mombasa, is now a major threat to wildlife. Poaching of turtles for their meat is common place. Turtles are not only caught as by-catch in nets, but fishermen also target turtles by setting nets in known feeding areas. Collection of turtle eggs from nests also takes place. Historically, fishermen would have been targeted dugongs for their meat; however numbers of dugong are now so low that human-related deaths are likely only due to accidental by-catch in fishing nets. Poaching of elephants for their ivory is still a threat, however, elephant numbers are very low (estimated less than 200 elephants in this region compared with 70,000 in the early 1970s). Recent elephant surveys reported a carcass ratio of 21% (ratio of dead elephants to live elephants), suggesting that mortality rates continue to be higher than most other areas of Kenya and this is likely due to poaching.

2.3.6 - Rangeland Degradation & Invasive Plant Species

The declining health of rangelands is a threat to wildlife in the more arid parts of the landscape. This is a particular concern for the critically endangered Hirola antelope; recent research has shown that bush encroachment and loss of grasslands over the past 30 years has resulted in significant range contraction of this species and coincided with the continued decline of the population. A threat that is likely only specific to Hirola due to their very low numbers in small herds, scattered across their range, is predation. The observations by NRT and Ishaqbini Conservancy of high predation mortality of Hirola from 2008 – 2011 resulted in the construction of a 2,700 ha predator-proof sanctuary in Ishaqbini. This has been extremely successful as a breeding sanctuary and now hosts approximately 25% of the known global population of Hirola. Predation, however, continues to be a threat to Hirola outside the sanctuary.

Climate change is likely to be driving further degradation of the rangelands, with more frequent droughts, erratic rainfall and conditions that promote bush encroachment. This coupled with over-grazing of existing grasslands is likely to put greater pressure on the grasslands at the periphery of the Boni/ Dodori forests as livestock move into these areas in greater numbers and for longer periods in search of pasture. Recent droughts have taken a significant toll on wildlife in the region; this is exacerbated by the influx of large numbers of livestock into the forests and flood-plain grasslands in search of pasture and water. These massive livestock herds displace wildlife into less productive parts of the landscape where there is insufficient water and food to sustain them. It is likely that thousands of buffalo and other wildlife died in the drought at the end of 2016.

Invasive plants species, particularly Prosopis judiflora (Mathenge) poses a massive threat particularly to riverine vegetation. Parts of Garissa and Tana River Counties adjacent to the Tana River have become chocked with this plant which quickly dominates as secondary growth in cleared areas, preventing other plants from growing. There are also indications that large stands of Prosopis are attracting elephants which feed on the seed pods, which is bringing elephants into conflict with people. Other invasive species in the region include Opuntia spp. which have the potential to spread over large areas resulting in loss of grazing land if not controlled.

2.3.7 - Human-Wildlife Conflict

Raiding of farms by wildlife and destruction of crops is a threat to food security in areas where families depend solely on subsistence agriculture; most crop raiding in this region is by buffalo, as well as baboons, elephant and hippo. In 2016 & 2017, NRT-Coast conservancies reported 8 people were killed by wildlife, with a further 11 people injured most commonly by buffalo. Conflict with buffalos and hippos at water points in the dry season is also common as availability of water is scarce and people, livestock and wildlife are dependent on the same water sources. Livestock predation by hyena, lion and wild dog is relatively common particularly in the pastoralist areas and is likely under-reported. There is little investment by government or external agencies in conflict mitigation and conflict may result in the death or injury of both people and wildlife. The recently established County Wildlife Compensation and Conservation Committees (CWCCC) have been slow to become operational and compensation claims have not been addressed, this is causing further resentment from the community and resultant retaliatory killing of wildlife which goes unreported.

2.3.8 - Overfishing & Destructive Fishing Practices

Marine resources are threatened largely by unregulated, destructive and illegal fishing practices. This results in the over-exploitation of inland reefs, habitat damage and subsequent decline of in-shore fish populations, which has a direct impact on the livelihoods and well-being of fishing communities. The Fisheries department has little capacity to police and enforce regulations, and most local communities have not been empowered to sustainably manage their marine resources.

The Fisheries Beach Management Unit regulations (BMU) Regulations were enacted in 2007, however, there has only recently been investment into developing the governance and management capacity of BMUs. There is also poor institutional and regulatory coordination among national and regional environmental agencies in this region (KWS, KFS, Fisheries and County Government). The area supports several important semi-commercial fisheries including lobster, crab, sea cucumber and in the past sharks; these fisheries are considered to be over-exploited.

Fisher catch rates and earnings are declining as human populations increase and greater pressure is put on marine resources. This is despite the significant increase in price over the past 10 years for some species including lobsters and shark-fin. Global

warming and in particular the El-Niño phenomenon is a threat to the marine environment as water temperatures increase resulting in coral bleaching and mass die-off of corals, which in turn affects fish and invertebrate species that depend on the coral reef habitats. Large, commercial off-shore fishing vessels (mostly foreign vessels) which are operating near to the shore damage coral reefs and the sea-bed and contribute to the high mortality of turtles as by-catch. These vessels are operating illegally within Kenya's 12nm territorial waters, however the Fisheries Department lack the resources to effectively police and enforce regulations.

The NRT-coast region has a wealth of natural resources that if sustainably managed and carefully conserved could continue to support the livelihoods of local people in the long-term. However investment is needed to empower communities and create appropriate governance structures to ensure local people have both the rights and responsibilities for managing their natural resources. Land-use, settlement planning and marine zoning, together with compliance and enforcement of these plans by local communities will be key to the conservation of critical ecosystems and the species that depend on these habitats to survive. Improving the lives of communities in a region beset by insecurity, marginalization and poverty is critical. Investment in livelihood improvements to diversify and increase income, and development targeting water, education and health are key to creating the incentives needed to create behavioral change towards sustainable management and conservation of natural resources.


Matt Brown

Sophie Harrison

2.4 - NRT-Coast Community Conservancies

NRT defines a Community Conservancy as a 'community-owned and community-run institution which aims to improve biodiversity conservation, land management and the livelihoods of its constituents over a defined area of land traditionally owned, or used, by that constituent community'. NRT believes that the long-term success of conservation on community land depends on building strong, well-governed community-owned institutions that ensure rights and responsibilities of conservation by local land-owners and equitable benefits to communities from conservation. Community Conservancies develop programs for peace, livelihoods, conservation and business development; they provide a formal structure for partner engagement and an organized platform and voice for people to manage their common resources.

Community Conservancies recognize the coexistence of people, their livelihoods and wildlife and the integration of all these in the management of the land, they do not create 'hard' boundaries which separate people from wildlife nor do they exclude other people from using the land.

In 2013, Conservancies were legally recognized under the Wildlife Conservation and Management Act, 2013 as a form of land-use and regulations for Conservancies are soon to be enacted. Other entities such as Community Wildlife Associations are also recognised in the Act and provide an alternative vehicle for community co-management of wildlife in circumstances where Conservancies may not be appropriate. Under the Fisheries and Forestry Acts, Beach Management Units and Community Forest Associations are the institutions for community co-management of fisheries and forest resources. Over the past decade, seven NRT community 'conservancies' have been established in the NRT-Coast landscape as a

means of empowering local people in the conservation and management of their natural resources (Table 1). The appropriate institutions to register these 'conservancies' are still under discussion due to the complexity of the landscape and potentially conflicting legislation governing community co-management of wildlife, fisheries and forest resources.

These conservancies encompass areas adjacent to the national reserves and have expanded this network of protected areas by 500,000 ha. The conservancies are creating a buffer around the reserves, and include important wetlands, maintaining the continuity of these vital habitats, improving the management of natural resources both within and adjacent to the reserves, and ensuring the long-term conservation and protection of wildlife in this region. These conservancies collectively employ 120 people and provide casual employment to a further 80-100 people a year through the infrastructure, development and natural resource management projects they undertake.

The NRT-Coast landscape has the potential for more community conservancies should communities wish to include conservation as a land-use and basis for improving the management of their natural resources as well as the livelihoods of their people. This model of community governance and management of resources may also have potential across the border into Somali in the future, if the region stabilizes.

NRT-Coast is a regional office of NRT. NRT was established in 2004 as an umbrella organization to support Community Conservancies in northern Kenya; its mission is to develop resilient community conservancies that transform lives, secure peace, and conserve natural resources. It does this through the establishment of community institutions (Conservancies); the establishment of reliable communications between communities, government and the private sector; enabling dialogue between historically conflicted communities; raising funds for Conservancies; providing advice and mentorship on management; supporting a wide range of training and acting as a fair broker on agreements between Conservancies and investors. It also monitors performance, providing donors and partners with a degree of feedback and quality assurance.

Table 1: Summary profile of the NRT-Coast conservancies

Conservancy	Year established	County	Area (ha)	Population (2009)	Main livelihood	Biodiversity importance
Ishaqbini	2007	Garissa	68,700	8,750	Livestock	Hirola, African wild dog, elephant. High densities of other wildlife including giraffe. Lowland dry forest, Acacia Commiphora bushland and grassland.
Ndera	2010	Tana River	116,400	7,300	Farming, fishing	Tana mangabey, Tana River red colobus, hirola. Riverine gallery forest, Acacia Commiphora bushland.
Lower Tana Delta	2013	Tana River	51,800	14,600	Farming, livestock, fishing	African wild dog, elephant, sea turtles, sharks, sawfish, small numbers of Tana River red colobus. Globally Important Bird Area (IBA), globally important wetland (Ramsar site), mangroves, coastal dunes and beaches.
Kiunga	2013	Lamu	23,900	2,200	Fishing, farming	African wild dog, elephant, sea turtles, dugong, rare and endemic corals and fish. Beaches for nesting turtles, seagrass beds, mangroves, dry coastal forest.
Hanshak Nyongoro	2013	Lamu	77,900	11,100	Livestock, farming	African wild dog, elephant, high densities of buffalo, topi, giraffe, hippo. Small numbers of hirola and Tana River red colobus. Coastal forest-grassland mosaic, wetlands.
Awer	2013	Lamu	153,300	2,900	Farming	Ader's duikder, African wild dog, elephant, hippo. Rare and endemic forest trees, East African coastal forest biodiversity hotspot.
Pate	2013	Lamu	27,800	11,800	Fishing	Sea turtles, dugong, rare and endemic corals and fish, seagrass beds, mangroves.

CHAPTER 3

NRT-COAST GOALS & OBJECTIVES

Community conservancies are a holistic and long-term approach to environmental conservation, economic and social development of communities. Each conservancy is in the process of developing its own Conservancy Management and Development Plan through an inclusive and participatory process, ensuring the vision and priorities of their community members are advanced through their respective conservancies. These documents will provide more detailed information on specific activities planned and investment needed at a local level. Table 2 provides a summary of the main challenges to human livelihoods and conservation as well as high level priorities for each conservancy over the next five years.

Cross-cutting priorities that emerged during discussions with Conservancies' leadership are set out as Goals for the NRT-Coast region over the next 5-years. These include:

1. Governance of conservancies & peace
2. Livelihood development
3. Natural resources & wildlife
4. Enterprise development
5. Sustainable conservancies

Table 2: Challenges and Priorities for NRT-Coast Conservancies over the next 5 years

Conservancy	
Ishaqbini	**Challenges for people, habitats & wildlife** - Insecurity - Access to water - Rangeland degradation - Lack of livestock markets - Lack of viable conservation enterprise options
	Priorities – 5 years - Hirola conservation, expansion of sanctuary - Long-term conservation financing - Water for people & wildlife - Rangeland management & rehabilitation - Livestock health - Awareness & communication
Ndera	**Challenges for people, habitats & wildlife** - Forest destruction – logging & clearing for farming - Invasive species - Bush-meat poaching - Human-wildlife conflict - Lack of access to markets for agricultural produce
	Priorities – 5 years - Water for people - Livelihood projects – agriculture, agro-forestry, enterprise, market access - Conservancy capacity – additional rangers, patrol boat, outpost - Land-use planning, forest management & restoration - Primate conservation - Enforcement – poaching, illegal logging - Tourism - Human-wildlife conflict mitigation - Awareness & communication
Lower Tana Delta	**Challenges for people, habitats & wildlife** - Inter-ethnic conflict - Insecurity - Forest & mangrove destruction – logging & clearing for farming - Bush-meat poaching - Over-fishing & destructive fishing methods - Influx of livestock - Unclear land ownership
	Priorities – 5 years - Land ownership - Peace building - Livelihood projects – agriculture, market access - Mangrove & forest conservation & management - Marine conservation – BMUs capacity, fish stock assessments & management - Enforcement – poaching, logging, illegal fishing - Conservancy infrastructure & capacity - Tourism investment - Partnerships - Awareness & communication
Kiunga	**Challenges for people, habitats & wildlife** - Insecurity - Unclear land ownership - Mangrove destruction - Overfishing & destructive fishing methods - Turtle poaching & by-catch - Human-wildlife conflict
	Priorities – 5 years - Marine zonation plans (LMMAs), fish stock assessments & management - Mangrove conservation & management - Land use planning - Enforcement – poaching, logging, illegal fishing - Water for people & wildlife - Land ownership - Ocean plastics recycling - Livelihood projects – enterprises, fish marketing, agriculture - Improved access to health care & education - Awareness & communication

Conservancy	
Hanshak Nyongoro	**Challenges for people, habitats & wildlife** - Insecurity - Water scarcity - Human-wildlife conflict - Illegal logging - Bush-meat poaching - No conservancy infrastructure, low conservancy capacity
	Priorities – 5 years - Livelihood projects – enterprises, livestock markets - Improved access to health care & education - Land use planning & zonation - Establish conservation focus - Water for people & wildlife - Enforcement – natural resource management & wildlife - Conservancy infrastructure - Awareness & communication
Awer	**Challenges for people, habitats & wildlife** - Insecurity - Lack of land ownership - Displacement of people - Lack of access to water - Human-wildlife conflict - Bush-meat poaching - Forest destruction – logging & clearing of land for agriculture - Lack of health & education services - Lack of awareness on impacts from proposed - Lamu Coal Plant
	Priorities – 5 years - Livelihood projects - enterprises & agriculture - Secure land ownership - Water for people & wildlife - Human-wildlife conflict mitigation - Improved access to health care & education - Engagement & advocacy on Lamu Coal Plant & LAPSSET - Conservancy infrastructure - Awareness & communication
Pate	**Challenges for people, habitats & wildlife** - Mangrove destruction - Overfishing & destructive fishing methods - Lack of fish storage & processing facilities - Turtle poaching & by-catch - Lack of access to fresh water - Lack of access to health & education - Ecological & social impacts from Lamu Port & proposed Lamu Coal Plant
	Priorities – 5 years - Mangrove conservation & management - Enforcement – logging, turtle poaching, illegal fishing - Marine conservation – additional LMMAs, sustainable fisheries, fishing equipment, fish stock assessments, habitat surveys - Enterprise – fish marketing, tourism - Conservancy & BMU governance - Ocean plastics & marine debris - Financial sustainability - Water for people - Conservancy capacity - Awareness & communication

GOAL 1: GOVERNANCE OF CONSERVANCIES & PEACE

Well governed and peaceful conservancies - **NRT conservancies will show representative, transparent, equitable and accountable conservancy governance, will be legally registered institutions, and will build peace between and within conservancy communities.**

Cross cutting issues across the majority of conservancies is the need for continued support and development of the conservancy institutions in terms of human capacity, resources for effective management and effective representation, as well as enhanced awareness and communication about the conservancy among the wider community and other stakeholders. Securing communal land ownership, or addressing unclear and conflicting land ownership, is a concern across several conservancies. In some parts of the landscape there is a history of ethnic conflict and mistrust between neighbouring communities, peace building between ethnic groups is a need in several conservancies.

Specific objectives for NRT-Coast over the next five years are to:

Strengthen conservancy institutions:

- Formally register Conservancy institutions as Wildlife Conservancies or Community Wildlife Associations under the Wildlife Act (2013)
- Develop the institutional capacity of conservancies with required infrastructure (headquarters, ranger outposts, roads and airstrips), equipment (vehicles, patrol boats, ranger equipment), training (boards, management and ranger teams) and operational support

- Develop the conservancy institutions as an effective, recognized and representative voice for their communities (meetings, AGM, community-led decision making, greater awareness and communication)

Address land issues:

- Address issues of land tenure security and ownership in Awer, and parts of Kiunga and Lower Tana Delta Conservancies, including registration of Community Land where appropriate

Build peace:

- Ensure effective radio communication across the NRT-Coast landscape through the installation and management of a digital radio network linking all 7 Conservancies with NRT and relevant Government agencies, to enhance peace and improve response by Government agencies to incidences of insecurity
- Develop conservancies as a platform for conflict resolution through inter-community dialogue, using elders, youth leaders and women
- Support an NRT-Coast conflict resolution team to address intra and inter conservancy conflict

GOAL 2: LIVELIHOOD DEVELOPMENT

Resilient livelihoods - **NRT conservancies will help to improve the water infrastructure, education, health, and diversify small-enterprises and agriculture in their constituent communities.**

As the 'development' arm for their communities, Conservancies are creating a direct link between conservation and community development. Provision of clean water emerged as the highest priority for all conservancies; most villages in the NRT-Coast region lack access to reliable, clean water supplies. This was so severe in the recent 2016/2017 drought that many villages were abandoned due to lack of drinking water and others had to rely on the Kenya Defense Forces to supply them with bottled water. Creating water sources for wildlife is also seen as a priority in some areas, and as a means to reduce human-wildlife conflict. Education and medical infrastructure is lacking in many areas and improving access to good quality education and health care is also a priority.

Many NRT-Coast conservancy communities are agriculturalists and there is a need to invest in modern and more environmentally sustainable farming methods in order to increase yields and reduce pressure on natural resources. Human-wildlife conflict in these agricultural areas is also an issue that undermines food security and perpetuates the cycle of poverty in these remote communities. Investment in diverse small-enterprises and access to micro-credit is seen as a priority to support livelihoods in all conservancies.

NRT is facilitating the development of Conservancy Management and Development Plans for each member conservancy. These plans are drawn up in a participatory manner ensuring the voice of all of the community or their representatives are captured. This ensures that the communities themselves identify the development needs of each community, including health, education, water and infrastructure. Conservancies are then able to fundraise and partner with donors, NGOs and County Government to support their priorities. Through the NRT Livelihood Fund, Conservancies in NRT-Coast have recently invested in projects such as construction of classrooms, infrastructure for rain-water harvesting, providing bursaries for school children, micro-finance for small-enterprise projects. The emphasis for NRT-Coast for the next 5 years will be:

Community development priorities:

- Facilitate the development of participatory Conservancy Management and Development Plans for all conservancies
- Ensure better coordination and funding from County Government, in particular to ensure Conservancy priorities and plans are integrated with the County Integrated Development Plans (CIDPs)

- Improve the fundraising capacity of conservancies to development NGOs in support of health and education projects
- Identify priority areas for water development and invest in water infrastructure to provide clean water for domestic use
- Provide conservancies with access to development funding through the NRT Livelihoods Fund
- Provide conservancy communities with access to micro-finance and SACCOs (Savings and Credit Cooperative Organizations) in support of diversifying small enterprises
- Engage and empowering youth through enterprise and entrepreneurial training and programs, to improve livelihoods and as a means to reduce radicalization and insecurity in the region

Agriculture and human-wildlife conflict mitigation:

- Identify and invest in appropriate agriculture projects aimed at increasing farm yields and reducing environmentally destructive farming methods in Ndera, Lower Tana Delta and Awer Conservancies
- Investigate options for human-wildlife conflict mitigation around farms in Kiunga, Ndera, Lower Tana Delta and Awer conservancies

GOAL 3: NATURAL RESOURCES & WILDLIFE

Rangeland, forest and marine ecosystems - **NRT conservancies will improve the condition of natural resources through development and implementation of land use plans and management practices that ensure the sustainable management, conservation and protection of natural resources and wildlife.**

The diverse ecosystems in the NRT-Coast region encompass rangelands, riverine forests, coastal forests, mangroves, coastal dunes, coral reefs and sea-grass beds. Sustainable management of these natural resources underpins human livelihoods and wildlife conservation in the region. Conservancies provide a platform to empower local communities for manage their natural resources, with a mandate, recognized by government, to enforce rules and regulations developed by the communities themselves within the context of national legislation. Although these ecosystems are diverse there are cross-cutting approaches to the development by conservancies of participatory land-use plans, zones and by-laws for the management of their rangelands, forests, marine environments and wildlife. Conservancies will be responsible for the enforcement of these plans and rules using rangers, Boards and other traditional governance structures.

The focus for the next 5 years will be on:

Marine & mangrove ecosystems:

- Facilitate effective and formal partnerships between Kiunga conservancy and KWS to support the conservation and management of mangroves and marine ecosystems in the Kiunga Marine Reserve
- Support Pate, Kiunga and Lower Tana Delta Conservancies, through their Beach Management Units, to establish and enforce zonation plans for fisheries management (Locally Managed Marine Areas, LMMAs)
- Establish appropriate community-managed marine monitoring systems (Marine-CoMMS) to track changes in marine ecosystem health and fish stocks over time
- Facilitate conservancy exchange visits to community marine conservation projects elsewhere to learn from best practice
- Promote the use of alternative, non-destructive fishing gears
- Investigate and promote appropriate mariculture projects (e.g. seaweed, sea cucumber, lobster, crabs, fish etc.)
- Develop capacity of conservancies for turtle conservation through effective monitoring and protection of turtle nests, turtle anti-poaching patrols and awareness to reduce turtle by-catch
- Address illegal logging of mangroves through effective patrolling and enforcement, mangrove zonation plans and by-laws, and enhanced collaboration with KFS on enforcement and prosecution
- Develop projects to deal with ocean plastic pollution including beach clean-ups, sorting and collection centers and plastic recycling

Forests & rangelands:

- Facilitate conservancies to develop participatory forest management plans including zonation delimiting areas for agricultural expansion and by-laws on forest use
- Through conservancies, enhance traditional

governance of forests that promote sustainable use of forest products

- Establish formal agreements and partnerships between Conservancies, KWS and KFS over forest co-management in Tana River National Primate Reserve, Boni and Dodori Reserves
- Support effective grazing management and rangeland restoration in Ishaqbini conservancy to recover grasslands
- Develop an invasive plant species management strategy and investigate options for control of invasive plant species including *Prosopis judiflora* and *Opuntia spp*.

Wildlife protection and conservation:

- Training of conservancy rangers through KWS and NRT in specialized anti-poaching skills
- Ensuring conservancy rangers are equipped with field equipment necessary for effective patrolling
- Support multi-ethnic, mobile anti-poaching team to support conservancy rangers in patrolling and enforcement across the NRT-Coast landscape
- Establish conservancy led monitoring of wildlife using Wildlife-CoMMS
- Carry out surveys in key habitats to monitor changes in wildlife numbers
- Establish partnerships with research organisations on key endangered wildlife species
- Support management of Ishaqbini Hirola Sanctuary, disease surveillance, sanctuary expansion and National Hirola Conservation Strategy
- Support Ndera conservancy in the protection, management and monitoring of key forest patches and critically endangered primates

GOAL 4: ENTERPRISE DEVELOPMENT

Growing enterprise - **NRT conservancies will develop increased wealth, jobs and diversified economic opportunity to their communities and establish conservancy-led businesses.**

Lack of access to markets for agricultural and livestock products and fish is a common issue across all conservancies. As a result communities are unable to realize their agricultural potential (including fisheries and livestock) and at certain times there is a surplus of produce which goes to waste. The region has poor road infrastructure and is a long way from the end markets in Mombasa, Malindi or Garissa. Identifying markets, addressing bottlenecks in the supply chains, and creating value-added products is needed. Prior to the insecurity that has plagued the region since 2011, tourism had the potential to expand across the area and generate significant revenues to communities and conservancies as well as create employment. However, until insecurity is addressed, the region has only low potential for tourism.

NRT will invest in enterprise through support to NRT's commercial arm, NRT-Trading, to expand the enterprise opportunities in NRT-Coast. These businesses aim to create wealth and employment, increase household income, generate revenue for conservancies and create direct financial benefits from conservation-related enterprises. Specifically NRT-Trading will invest resources in the development or expansion of the following enterprises:

- Fish-to-markets – expanding the pilot project 'OCEANworks' in the processing and marketing of larger fish and pelagic fish to encourage fisherman to fish off-shore using non-damaging fishing gear such as hook and line

- Mangoes – up-scaling the pilot project to streamline the transport and sale of Mangoes from Ndera and Lower Tana Delta to markets in Malindi and Mombasa
- Tourism – partnerships with investors, marketing and tourism infrastructure; this is currently hampered by insecurity in the region, however tourism is showing signs of recovery in Lamu
- Investigate potential for other enterprise opportunities

GOAL 5: SUSTAINABLE CONSERVANCIES

Financially sustainable conservancies - **NRT will increase the ability of conservancies to meet their operational costs, provide community benefits, and build strong partnerships to sustain conservancies in the long-term.**

NRT will aim to increase revenue to conservancies to ensure their long-term financial sustainability through the following mechanisms:

- Secure long-term partnerships and financial commitments from organizations committed to the vision of NRT-Coast, biodiversity conservation and community development in this region
- Investigate the potential of Carbon Projects in generating revenue for conservancies through forest and mangrove conservation (REDD++ and Blue Carbon)
- Increase commitments from County Governments in support of Community Conservancy conservation and livelihood development priorities
- Increase conservancy-level revenue from commercial enterprises including tourism and other NRT-Trading businesses
- Improve linkages with National and County Government agencies, through formal agreements where needed
- Improve coordination between other NGOs and stakeholders working in the NRT-Coast region
- Provide support for conservancy advocacy and engagement with large-scale national infrastructure projects such as LAPSSET, Lamu Port and the proposed Lamu Coal plant

CHAPTER 4

BUDGET

To support the vision of NRT-Coast and the seven member Community Conservancies requires approximately **USD 2.5 million per year** over the next five years. This includes salaries of staff, vehicle and boat operating costs, meetings and training for Conservancy Boards and committees, enhanced community awareness and communication, and investment into governance, livelihood, habitat and wildlife conservation, and enterprise programs.

NRT Coast and Conservancy operations require approximately **USD 1 million** per year to maintain basic operations. An additional investment of **USD 900,000** into conservancy infrastructure and equipment (headquarters, ranger outposts, vehicles and boats) is needed over the 5-year period.

Investment into specific programs including governance and peace, livelihoods (water, education, health and agriculture), conservation and management of marine and terrestrial ecosystems and wildlife, and enterprise (fish and mango marketing and tourism) requires a further investment of approximately **USD 6.5 million** over the next five years. Investment into the long-term sustainability of these conservancies includes development of enterprises that can create revenue streams for conservancies, investment into potential for Blue and REDD++ Carbon, and building partnerships with County and National Government and other development and conservation organizations.

The following budget tables provide summaries of the total investment over 5-years into NRT-Coast region, per conservancy and program and annual budget summaries.

Table 3: 5-year budget for NRT Coast Office, Operations, Programs and Infrastructure for and each of the seven Community Conservancies

	5-year Master Budget (2018-2022) US$								
Budget heads	**Total Budget 5 Years**	**NRT-Coast**	**Pate**	**Kiunga**	**Hanshak-Nyongoro**	**Awer**	**Ishaqbini**	**Lower Tana**	**Ndera**
Operations	4,828,774	1,628,710	344,950	515,028	313,627	349,704	928,564	370,905	377,287
Governance & Peace	1,264,986	497,381	119,640	123,184	22,168	156,804	58,970	263,945	22,894
Livelihoods	1,986,500	122,000	310,000	288,000	180,500	278,000	370,000	210,000	228,000
Productive Ecosystems & wildlife	2,510,609	82,574	237,526	453,944	265,500	250,066	1,050,999	108,500	61,500
Enterprise	746,570	-	237,250	276,250	15,000	28,000	15,000	115,070	60,000
Growth & Sustainability	54,865	-	-	-	-	30,000	8,288	8,288	8,288
CONSERVANCY CAPPEX	955,300	139,800	25,500	30,000	270,000	270,000	45,000	90,000	85,000
GRAND TOTAL	**12,347,604**	**2,470,466**	**1,274,866**	**1,686,406**	**1,066,795**	**1,362,574**	**2,476,821**	**1,166,708**	**842,969**

Table 4: Annual budget for NRT Coast Office and each of the 7 Community Conservancies (five years)

	5-year Master Budget (2018-2022) US$								
Financial Year	**Total Budget 5 Years**	**NRT-Coast**	**Pate**	**Kiunga**	**Hanshak-Nyongoro**	**Awer**	**Ishaqbini**	**Lower Tana**	**Ndera**
2018	2,535,290	447,738	309,289	395,345	393,249	295,478	362,647	158,925	172,621
2019	3,823,710	528,118	325,778	464,656	236,387	513,032	1,081,954	440,944	232,841
2020	2,325,550	478,446	240,722	362,644	199,507	235,475	330,202	268,347	210,208
2021	1,915,488	488,032	188,614	273,156	107,432	233,163	352,912	156,911	115,268
2022	1,757,567	528,131	210,463	190,606	130,221	95,426	349,107	141,581	112,031
TOTALS	**12,357,604**	**2,470,466**	**1,274,866**	**1,686,406**	**1,066,795**	**1,372,574**	**2,476,821**	**1,166,708**	**842,969**