



The Kasigau Corridor REDD Project Phase II – The Community Ranches

Project Implementation Report

Taita Ranching Company Ltd	Maungu Ranching (DA) Company Ltd	Mgeno Ranching (DA) Company Ltd
Kasigau Ranching (DA) Company Ltd	Kambanga Ranching (DA) Company Ltd	Wangala Ranch
Amaka Ranching Company Ltd	Dawida Ranching (DA) Company Ltd	Washumbu Ranching (DA) Company Ltd
Sagalla Ranching (DA) Company Ltd	Choke Ranching (DA) Company Ltd	Kutima Ranching Company Ltd
	Ndara Ranching (DA) Company Ltd	

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Project Implementation Report (PIR)
For Verification Using the
Climate, Community and Biodiversity (CCB)
Project Design Standards Second Edition – December 2008

Verification Period: January 1st, 2010 through December 31st, 2010

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Verification Period - Project Start Date through December 31st, 2010

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EXECUTIVE PROJECT SUMMARY

This Project Implementation Report (PIR) is being prepared for the first verification of the Kasigau Corridor REDD Project – Phase II the Community Ranches. It addresses the major project activities that have commenced since the project start date: January 1st, 2010. Activities in this first verification period include those that could be initiated without the benefit of receipt of any carbon credit revenues from the project, as no credits can be issued prior to VCS verification. Recognizing the vast value of a CCB validation, Wildlife Works now wishes to include CCB certification on the credits generated by this project, and hopes to also do so for future projects. We have initiated selection processes for a Community Investment Fund Committee that will make decisions on how to invest the communities' portion of the carbon funds. Receipt of carbon revenue will ultimately facilitate major decisions on community investment. However, Wildlife Works has received income from Phase I (Rukinga Sanctuary) for this project, and as a result has already made significant investments in the Phase II activities, as outlined in this document.

This project is being implemented by Wildlife Works Carbon LLC, on behalf of the indigenous Community Group of landowners, who are the owners of the carbon credits derived from a Reduced Emissions from Deforestation and Degradation (REDD) project in SE Kenya in an area of wilderness known as the Kasigau Corridor.

The objective of the project is to protect in perpetuity those dryland forests that form a wildlife dispersal and migration corridor between Tsavo East and Tsavo West National Parks, to conserve the important biodiversity found in those forests, to provide alternative sustainable development opportunities for the local communities that live adjacent to the forests and to prevent the Emissions that would otherwise occur were those dryland forests to be converted to subsistence agriculture using the Slash and Burn methods typical to this area of Kenya.

This project has also been submitted under the Voluntary Carbon Standard (VCS) REDD AUMDD Standard following the approved VCS methodology VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests V1-0. The climate section below will represent carbon reductions calculated for the current monitoring period, according to the carbon accounting procedures described in the VCS MED.

For this first verification period, the project avoided over a million tonnes of CO₂e across the Carbon Pools of above and belowground biomass, as well as soil carbon.

We will also show that throughout this verification period, the project has contributed to the protection of a fantastic diversity of mammals (over 50 species of large mammal, more than 20 species of bats), birds (over 300 species) and important populations of IUCN Red List species such as Grevy's zebra (*Equus grevyi*), Cheetah (*Acinonyx jubatus*), Lion (*Panthera leo*), African wild dog (*Lycaon pictus*) as well as over 2000 African elephants (*Loxodonta africana*) seasonally.

GENERAL SECTION

G1. Original Conditions in the project area

General Information

G1.1. Project Area Location and Physical Parameters

Please refer to this section in the Project Design Document.

G1.2. Types and Condition of Vegetation at the project area

Please refer to this section in the Project Design Document.

G1.3. Project Boundaries of the project area and the project area

Please refer to this section in the Project Design Document.

G1.4. Carbon Stocks within the project zone

Carbon stocks were measured using the approved VCS methodology *VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests V1-0*. Wildlife Works chose to use this approach, as we are concurrently validating this project with VCS. Additionally, Wildlife Works owns and maintains the VCS methodology referred to above, and therefore has strong experience implementing its procedures and adhering to the methodology's applicability conditions.

Due to an experienced and effective team of Wildlife Works personnel on the ground at the project zone, and because we always focus on local job creation and training whenever possible, we chose to conduct our Carbon Forest Inventory using fixed permanent plot sampling, covering the entire 169,741 hectares with a statistically representative numbers of plots. Please see "Standard Operating Procedure Biomass" and "Standard Operating Procedure Soils" documents, provided to the verifier, for detailed field protocols used throughout this Phase II project.

The project area comprises 169,741 ha of dryland forest located in the southeast of Kenya. Altitudes range from approximately 450m to 1000m (see elevation map in section 6.3 The Reference Region), and the ecosystem encompasses montane forest on the slopes of the higher elevations, transitions through Acacia-Commiphora dryland forest at mid elevations and levels at grassland-dominated savannah at the lowest elevations. In order to most accurately estimate biomass in the Phase II project area, with reasonable time and expense, we divided the entire zone into 7 landcover strata based on ecosystem type, as there is a high perceived variation in average biomass across the 6 forest strata, with larger trees in high density in the dense montane forest stratum, medium to large trees and lots of shrubs in the middle dryland forest strata and scattered trees, very few shrubs and heavy grass cover in the grassland / sparse stratum. Overall, the 7 strata sum to the total project land area, depicting overall landcover in the Phase II project.

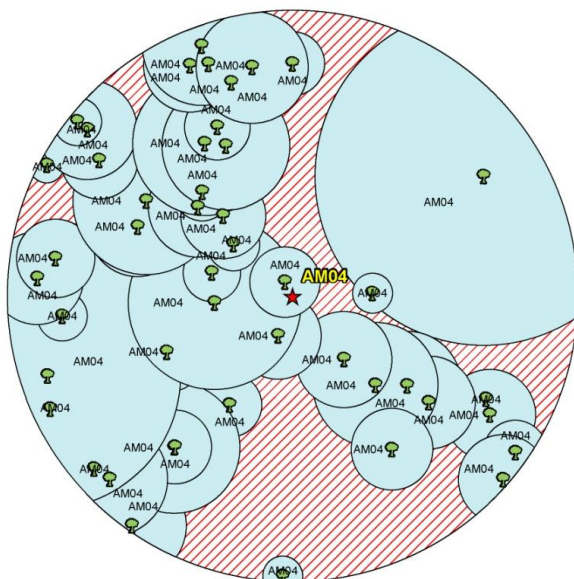
Biomass plot sampling was conducted throughout the monitoring period under the supervision of Wildlife Works VP Carbon Development Jeremy Freund and VP African Field Operations Rob Dodson. All plot sampling was conducted using the same successful, exacting protocol that was used for the Kasigau Corridor Phase I, Rukinga Sanctuary VCS project, and adheres to the methodology *VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests V1-0* previously referred to. Proper adherence to the SOP was ensured throughout the sampling process for all 13 group ranches.

To most accurately estimate biomass in the sanctuary, within the monitoring period at reasonable cost, we determined that a stratified random plot sampling technique would be best suited to the project area. A total of 429 Plots were overlaid on each of the 13 group-owned ranches in a stratified random pattern for all strata identified in the landcover map shown below, and the Biomass SOP was used to collect a comprehensive forest inventory, also summarized below.

Soil inventory coordinates were provided to the soil plot sampling teams by our GIS team, at randomly selected forest plot locations, in a subset of ranches, as well as in shambas (farms) adjacent to the project area, in the reference region. They sampled using the following method,

illustrated further in the Standard Operating Procedure Soils provided separately to the validator.

Every REDD project must initially demonstrate that it meets the definition of “forest” under UN IPCC guidelines. This guideline was initially 30% but has been revised down to 15% in Kenya. This involves meeting minimum 15% canopy cover requirements. We field-measured the distance from center of plot, azimuth and canopy diameter for all sampled trees, allowing us to use ArcGIS to calculate canopy percentage for each plot (see plot example for Amaka Ranch below), and then derive an average canopy cover for the project area. The Kasigau Corridor REDD Project achieved 34.6% average canopy coverage and therefore qualifies as forest under UN IPCC guidelines.



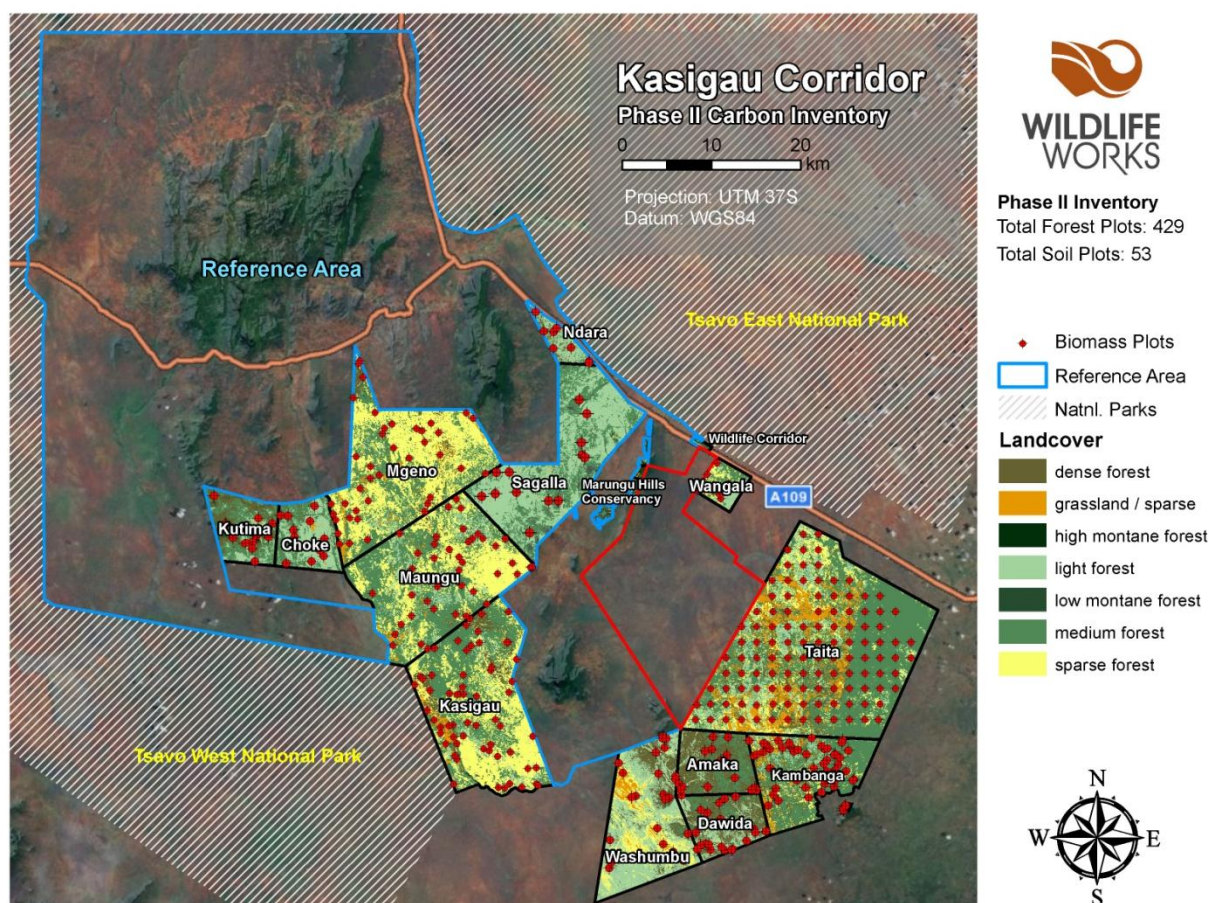
Sample canopy cover GIS analysis plot in Amaka Ranch

We chose to include the following carbon pools in the project, inferring significant contributions to emissions reduction from each:

- Aboveground Biomass – trees
- Aboveground Biomass – shrubs and grasses
- Belowground Biomass – trees
- Belowground Biomass – shrubs and grasses
- Fallen Dead Wood - excluded
- Soil Carbon

We chose not to include:

- Leaf litter - a relatively small pool, and their exclusion would lead to a conservative estimate of carbon stocks.
- Wood Products - we do not permit any harvesting of wood from the project area (planned deforestation / degradation), and virtually no harvesting of wood for long-lived products occurs illegally within the project area.
- Fallen dead wood - we considered its omission from the carbon pools to be conservative.



Landcover Strata Boundaries and Plot Locations for the Phase II Forest Carbon Inventory

Aboveground Biomass – trees

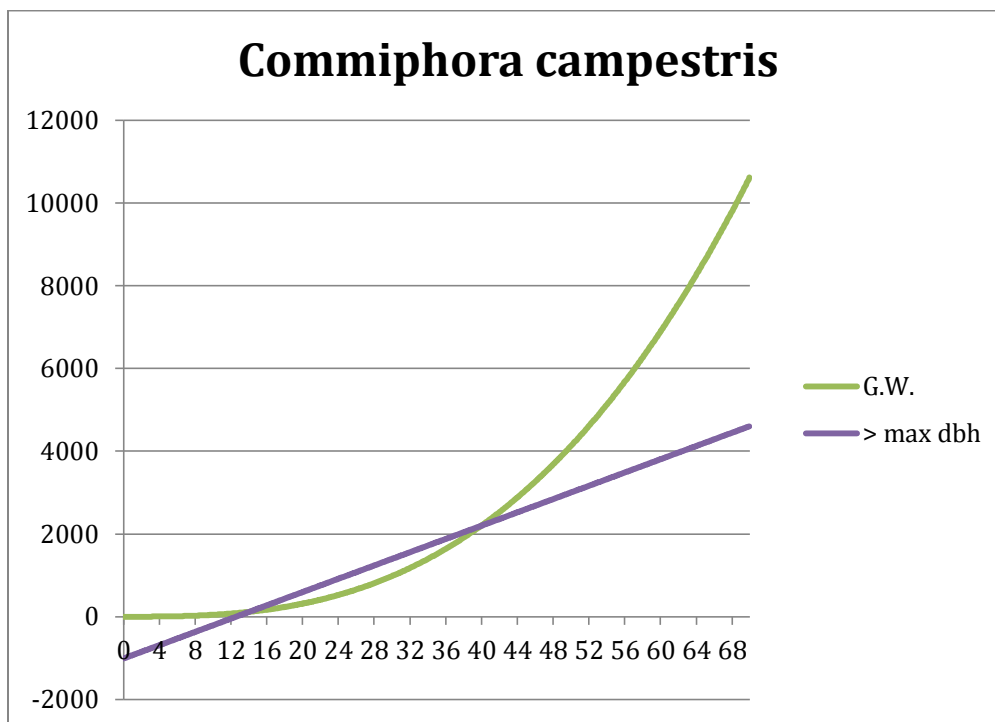
We conducted a review of the references in the UN IPCC 2006 GL for AFOLU and could not locate refereed literature focused on dryland tropical forest. As a result, we concluded that average biomass and the allometric equations presented in the UN literature would lead to significant over estimation of the carbon in our forest. Commiphora species are not dense (hard) trees and are therefore relatively light in relation to a given diameter. Furthermore, none of the tree species in Phase II are of commercial value. Consequently, little timber, and therefore very little scientific data, exists for them.

To produce data for the types of species in the project area, we used limited destructive harvesting, cutting and weighing a range of trees at varying dbh. We then derived custom allometry for each of the dominant species present in the project. For rare species, with little statistical importance to the biomass estimates, we used a mean equation derived from the total of all destructive harvest of all species.

Upon the suggestion of the validator, rather than utilizing simple power curves relating dbh to green weight, we opted for a more conservative approach to ensure that our allometry was not overestimating biomass, due to the relatively small number of large trees destructively harvested. This approach is described below:

- For all trees smaller than 35cm dbh, we developed a power relationship between dbh and green weight of the form $Green\ Weight = a[DBH]^b$

- For trees measured above the maximum destroyed dbh for each species, a linear model was used, the slope of which is equal to the tangent of the line at 35cm dbh for the all-species curve. This ensures a two-piece approach, with a power curve capturing the variability for all trees of smaller size, and a more conservative linear model for larger trees for which we had less data:



For example, for the most prevalent of the species in the project area, *Commiphora campestris*, the plot of tree green weight to dbh is as demonstrated above. The standard dbh/G.W. power curve was developed from destructively harvested data

$$\text{Green Weight} = 0.06774[\text{dbh}]^{2.81566}$$

whereas the linear equation is used for all *Commiphora campestris* species measured above the maximum dbh that was destructively harvested (40cm).

- As an additional measure of conservativeness, we opted to use weighted regression to develop the power curves for smaller trees, ensuring that the scarcity of large trees was not excessively biasing the model. Coefficients for all destructively harvested trees are presented below, along with their weighting type:

Species	Weight Type	a	b	N	Max DBH	R ²	$\bar{E}$
<i>Acacia bussei</i>	None	3.3796	1.6416	8	18	.80	7.82
<i>Acacia hockii</i>	None	0.6850	2.1820	17	23	.93	-2.46
<i>Acacia nilotica</i>	None	1.3615	1.9513	10	23	.86	14.83
<i>Acacia tortilis</i>	None	2.6060	1.6175	9	20	.85	0.13
<i>Boscia coriacea</i>	1/BA	0.2033	2.3647	15	34.2	.77	7.30
<i>Boswellia neglecta</i>	1/BA ²	1.3025	1.8332	18	37	.40	13.87
<i>Commiphora africana</i>	1/BA ²	0.6293	1.9456	17	24	.75	13.17
<i>Commiphora campestris</i>	1/BA ²	0.06774	2.8156	17	40	.83	13.072
<i>Commiphora confusa</i>	None	0.1147	2.6634	18	23	.77	2.912
<i>Lannea alata</i>	DBH	0.5603	2.1027	17	17	.85	13.216
<i>Lannea rivae</i>	None	0.1488	2.6421	22	16	.54	11.7
<i>Acacia sp.</i>	None	1.1421	1.9954	44	23	.85	1.99
<i>Boscia sp.</i>	1/BA	0.2033	2.3647	15	34.2	.77	7.30
<i>Boswellia sp.</i>	1/BA ²	1.3025	1.8332	18	37	.40	13.87
<i>Commiphora sp.</i>	1/BA	0.10527	2.66544	52	40	.87	11.26
<i>Lannea sp.</i>	None	0.3288	2.3233	39	17	.62	11.18
All species (<35 cm DBH)	None	0.3411	2.3016	166	34.2	.74	9.50

Accuracy allometry coefficients for dominant species in Phase II

- Genus-level allometric equations were developed using all trees for each of 5 dominant Genuses in the ecosystem, and these curves were used when species-level equations were not available. In the absence of genus-level curves, the all-species curve was used by default, for those rare trees for which no destructive harvest data was available.

Results for all of the remaining species can be found in the supporting file "allometry_weighted_PhaseII.xlsx", available to the validator upon request.

These allometric equations were used to calculate aboveground *Green Weight* for each species in each plot in each stratum for each of the ranches in the project zone.

A carbon fraction, cf_{sp} , for all species of 50% was used for trees and shrubs, and 45% for herbaceous vegetation, as per the UNIPCC 2006 GL AFOLU Chapter 3.2, and an average dry weight to green weight of 50% to convert biomass to tonnes Carbon, according to equation [50] in the VCS methodology

$$x_{i,j,k} = \frac{44}{12} \times \frac{1}{1,000} \times f_{sp}(\bullet) \times cf_{sp} \quad [50]$$

Aboveground biomass was aggregated for all tree species within each plot, as per equation [45] in the VCS methodology

$$y_{j,k} = \frac{1}{a_{j,k}} \sum_{i \in X_{j,k}} x_{i,j,k} \quad [45]$$

where:

$y_{j,k}$ = a quantity estimated for or measured on plot j in stratum k

$a_{j,k}$ = area of plot j in stratum k

$x_{i,j,k}$ = a quantity estimated for or measured for individual i on plot j in stratum k

$X_{j,k}$ = set of all measurements of a type in plot j in stratum k

Belowground biomass for all vegetation was calculated using a root:shoot ratio of 0.4 (as per the UNIPCC 2006 GL AFOLU Chapter 3.2)

The results of these calculations can be found in the supporting carbon model databases for each ranch, available to the auditor upon request.

The sum of all plots within a strata within each ranch was performed, yielding a total aboveground and belowground biomass aggregate value presented in metric tonnes GHG per strata, per ranch, which was then expanded by the area of each strata to provide a total GHG value for each ranch.

Finally the ranch totals were summed to provide a project area total, measured in m.t.GHG.

The results of these calculations can be found in the supporting aggregate spreadsheet: "Forest Inventory Phase II Summary-Strata2_v4.xlsx".

Aboveground Biomass – Shrubs

See Annex 2 for the plot sampling methodology used to capture the data from the field to use to calculate the shrub carbon pool. Shrub biomass was calculated using destructive harvest factors for the dominant shrubs and a miscellaneous shrub category. This was performed for each plot within a stratum within each ranch, and the totals were aggregated across all plots by strata, for each ranch, and then totaled across ranches for a project area total.

Aboveground Biomass – Herbaceous

See Annex 2 for the plot sampling methodology used to capture the data from the field. We harvested grasses from four 1m square plots in quadrants within each of the fixed tree sampling plots. Grass bundles were dried and weighed to obtain sample plot grass weights, and an area expansion factor was applied to calculate plot and strata total carbon biomass in metric tonnes per hectare. We then applied the Carbon Dioxide / Carbon ratio (44/12) to obtain total CO₂e inventory. This was performed for each plot within a stratum within each ranch, and then the totals were aggregated across all plots by strata, for each ranch, and then totaled across ranches for an aggregate project area total.

Soil Carbon

The procedure used to calculate soil carbon was again taken from the VCS methodology *VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests V1-0*. The field sampling methodology utilized is outlined in Annex 2. For this Phase II project, soil samples were taken from randomly selected tree sample plot locations within 3 ranches in the project zone, and then used to calculate unconverted soil carbon stock within the dryland forest, to compare with those values obtained for outside farms cleared at least 10 years prior to start date.

Using equation [61] of the VCS methodology *VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests V1-0*, we calculated soil carbon loss

$$y_{j,k} = \frac{44}{12} \times 10 \times cf_{soil,j,k} \times \rho_{soil,j,k} \times d_{j,k} \times \left(1 - \frac{v_{rf,j,k}}{v_{soil,j,k}}\right) \quad [61]$$

where:

$y_{j,k}$ = soil carbon stock in plot j stratum k

$\rho_{soil,j,k}$ = bulk density of fine portion of soil sample in plot j in stratum k

$cf_{soil,j,k}$ = carbon fraction of soil sample in plot j in stratum k

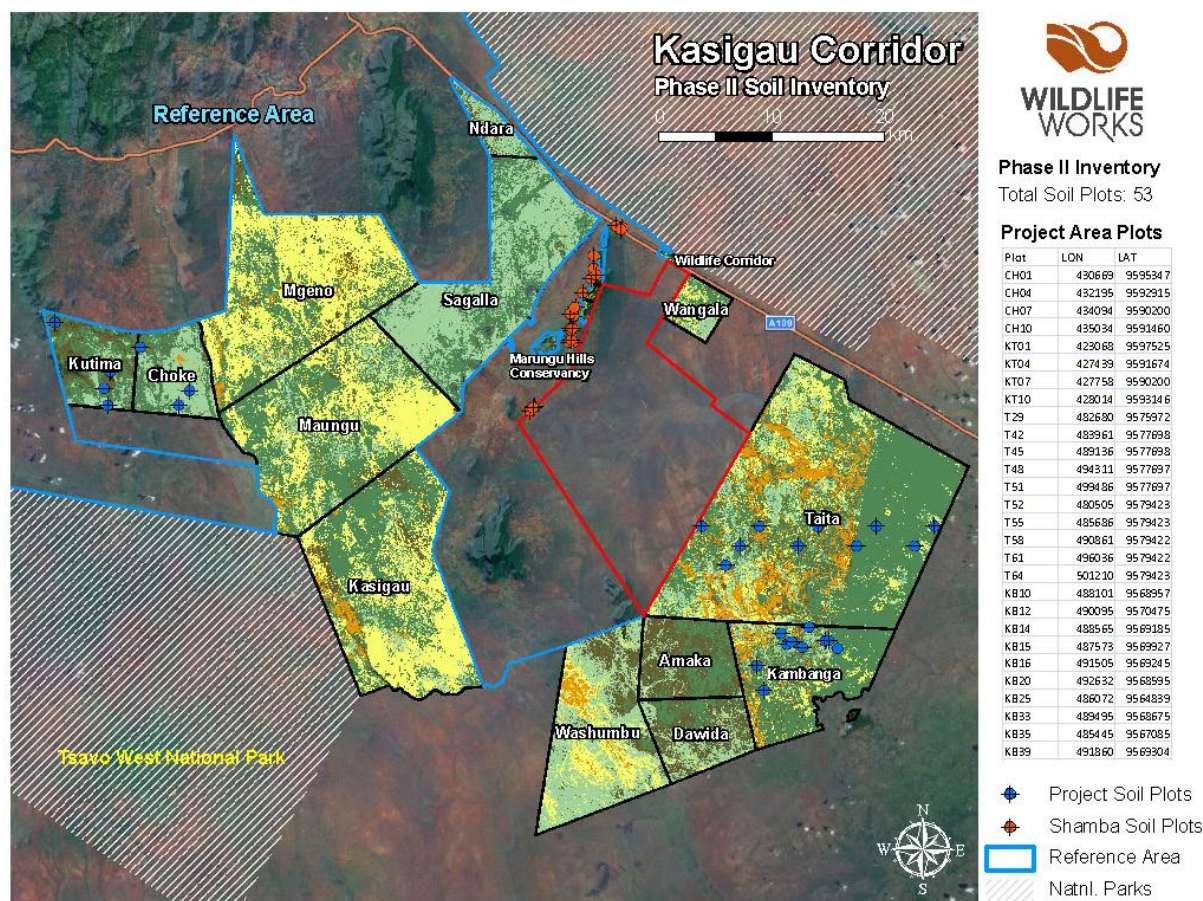
$d_{j,k}$ = depth of soil sample in plot j in stratum k

$v_{soil,j,k}$ = total volume of soil sample in plot j in stratum k

$v_{rf,j,k}$ = volume rock fragments (> 2mm) in soil sample taken in plot j in stratum k

A scientifically recognized standard factor of 1.724 (58% SOM=SOC)¹ was used to convert soil organic matter (SOM) as measured in the plot samples by the independent testing laboratory Crop Nutrition Laboratory Services to soil organic carbon (SOC). Bulk density was also calculated by the lab. The Carbon Dioxide / Carbon ratio (44/12) was applied to yield CO₂e.

The soil carbon plots, both within (unconverted) and outside (converted) the project zone are shown in the following map:



The results obtained for soil carbon starting inventory during Phase II *within the project zone* are illustrated in the following table:

¹ Bohn, McNeal, O'Connor. 1979. Soil Chemistry. Wiley – Interscience publication.

Ranch	Plot	Top Soil Bulk Density (g/cm ³)	Top Soil Carbon (%)	Sub Soil Bulk Density (g/cm ³)	Sub Soil Carbon (%)	Total Soil Carbon (t/ha)	Soil GHG Equivalent (t/ha)
Choke	CH01	1.290	1.470	1.300	0.790	128.779	472.190
Choke	CH04	1.290	1.210	1.310	0.750	115.602	423.874
Choke	CH07	1.420	0.920	1.320	0.480	83.544	306.328
Choke	CH10	1.350	1.090	1.300	0.690	106.935	392.095
Kutima	KT01	1.330	1.070	1.320	0.250	65.793	241.241
Kutima	KT04	1.210	0.800	1.380	0.420	69.612	255.244
Kutima	KT07	1.160	0.510	1.220	0.430	54.470	199.723
Kutima	KT10	1.200	0.960	1.440	0.370	71.856	263.472
Taita	T64	1.348	1.732	1.304	1.099	170.389	624.760
Taita	T52	1.304	1.341	1.324	0.648	112.574	412.773
Taita	T58	1.434	1.436	1.399	1.216	180.784	662.874
Taita	T42	1.377	1.341	1.341	0.880	137.983	505.938
Taita	T29	1.369	1.543	1.332	0.900	147.340	540.248
Taita	T61	1.328	1.484	1.257	0.687	119.512	438.209
Taita	T45	1.446	1.218	1.364	0.674	117.204	429.747
Taita	T48	1.354	1.166	1.302	1.019	140.292	514.404
Taita	T55	1.524	0.915	1.397	0.715	111.797	409.923
Taita	T51	1.247	1.578	1.281	0.868	136.897	501.956
Kambanga	KB10	1.376	1.417	1.467	0.804	141.101	517.372
Kambanga	KB12	1.320	1.186	1.345	0.854	127.347	466.938
Kambanga	KB14	1.382	0.867	1.343	0.781	109.337	400.904
Kambanga	KB15	1.261	1.428	1.279	0.781	123.904	454.316
Kambanga	KB16	1.399	0.731	1.399	0.819	110.916	406.692
Kambanga	KB20	1.179	1.673	1.350	0.884	142.743	523.391
Kambanga	KB25	1.363	1.599	1.357	0.636	125.821	461.342
Kambanga	KB33	1.520	1.001	1.396	0.897	133.236	488.531
Kambanga	KB35	1.416	1.215	1.399	0.883	138.034	506.124
Kambanga	KB39	1.327	1.540	1.299	1.294	178.951	656.155

A total of all emissions reductions claimed in the project zone for the monitoring period from January 1st, 2010 to December 31st, 2010 is presented below:

Net Emissions Reductions (NERs) to date are quantified from the following components (tonnes CO₂e) with 250,718 and 1,002,870 tonnes CO₂e to buffer pool and issuance, respectively.

Component	Value
Soil Reduction	769,090
Forest Reduction	489,348
Total Baseline Emissions Reduction	1,253,588
Uncertainty Deduction	0
Project Emissions	0
Emissions from Leakage	0
Gross Total NERs	1,253,588
NERs to Buffer Pool (20%)	250,718
Net Total NERs	1,002,870

Total emissions reductions for the verification period between January 1st, 2010 and December 31st, 2010

Community Information

G1.5. Community Information

Please refer to this section in the Project Design Document.

G1.6. Current Land Use

Please refer to this section in the Project Design Document.

Biodiversity Information

G1.7. Current Biodiversity

Please refer to this section in the Project Design Document.

G1.8. High Conservation Values Evaluation

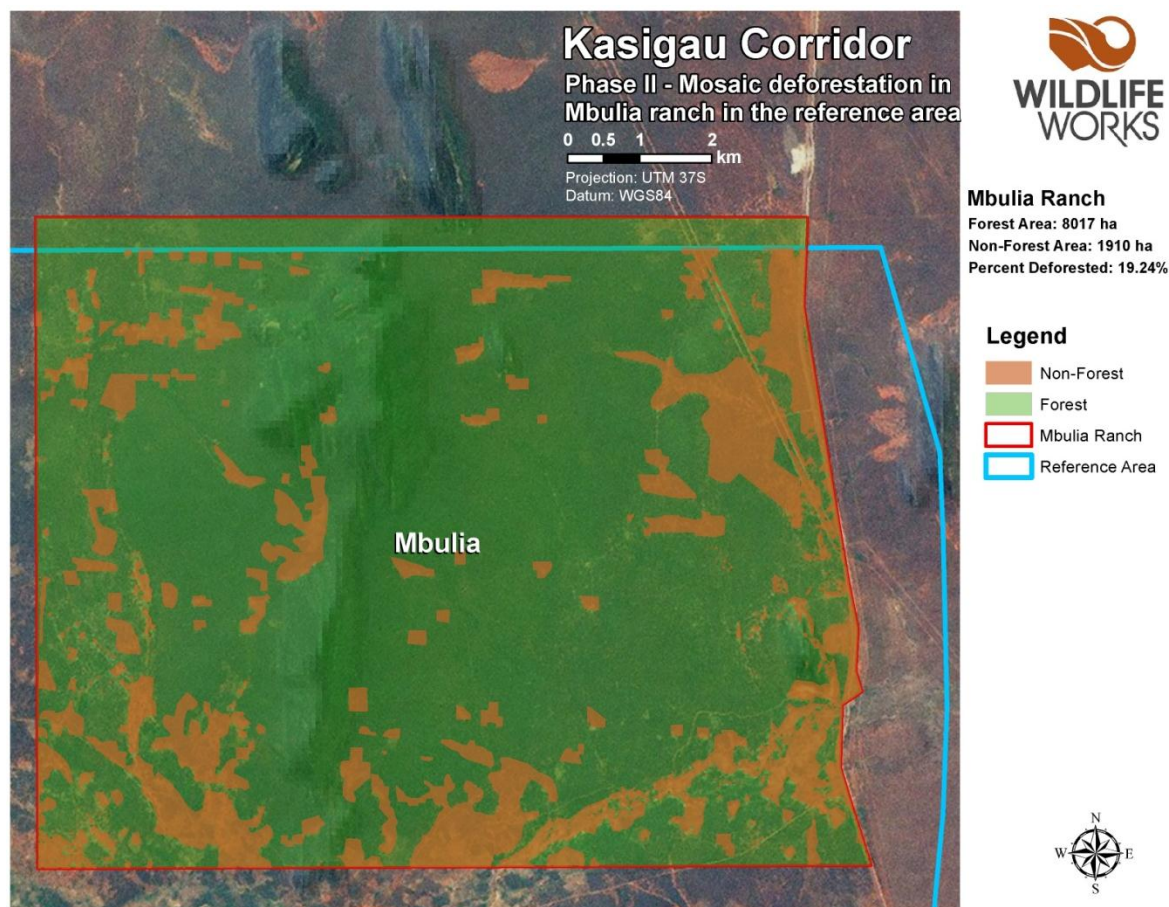
Please refer to this section in the Project Design Document.

G2. Baseline Projections

G2.1 – Most Likely Land Use

Unlike many REDD projects, it was not difficult to identify the baseline scenario for this project, which is rapid deforestation due to unplanned slash and burn agricultural expansion by subsistence immigrants at the frontier of human expansion, as all the conditions of the baseline were in place before the arrival of Wildlife Works. There is little need for speculation as to what would happen in the absence of the project if protection of the project area ceased and alternative livelihoods were not offered: the mosaic pattern of deforestation would certainly expand into the project area.

To further illustrate this point, an evaluation of the reference area (the area from which the baseline scenario, or "without-project" scenario was observed) was performed. The reference area contains group ranches under identical land tenure (group-owned ranches) as those within the project area. The map below depicts Mbulia ranch landcover analysis using Landsat 7 ETM+ data from 2009. The classification confirms that the land tenure status, identical to that within the project area, offers little to no protection against incursion, and it can be easily observed below following a classic mosaic configuration. The analysis shows that nearly 20% of the ranch has been deforested illegally through 2009.



Mbulia group ranch in the Kasigau Corridor reference region



Typical deforested area in the Kasigau Corridor reference region. View from the ground and from the air.

The project area has previously been used for sporadic grazing of cattle, and within Taita Ranch, a small ecotourism lodge. Both activities failed due to lack of funds, and cattle ranching is difficult due to a fragile ecosystem and lack of water, which has led the current shareholders to a situation of financial crisis and unsustainability. The heavy losses from the most recent drought have now crippled their activities completely.

Aggressive cutting of trees for the production of charcoal is also another source of land use in the area where a few benefit from the income to the detriment of the actual land owners. This is particularly a problem in Mgeno Ranch, a significant portion of which was being abused before the start of the project.

Financial Data for the ranches – please note that the financial data for the ranches that we are in partnership with is confidential, but was provided for the Validators.

Aforestation of plantation species and agricultural activities cannot profitably be carried out in this ecosystem due to a lack of water and a fragile ecosystem. We therefore believe that we have demonstrated, through our efforts to attempt many different economic activities, and by the fact that all the group ranches in the area have substantial annual and carry forward operating losses, that there are no credible alternative economic uses for this land that could compete with the project financially, or provide financial sustainability that would otherwise protect it from slash and burn use by the community.

G2.2 – Additionality

Please refer to this section in the Project Design Document.

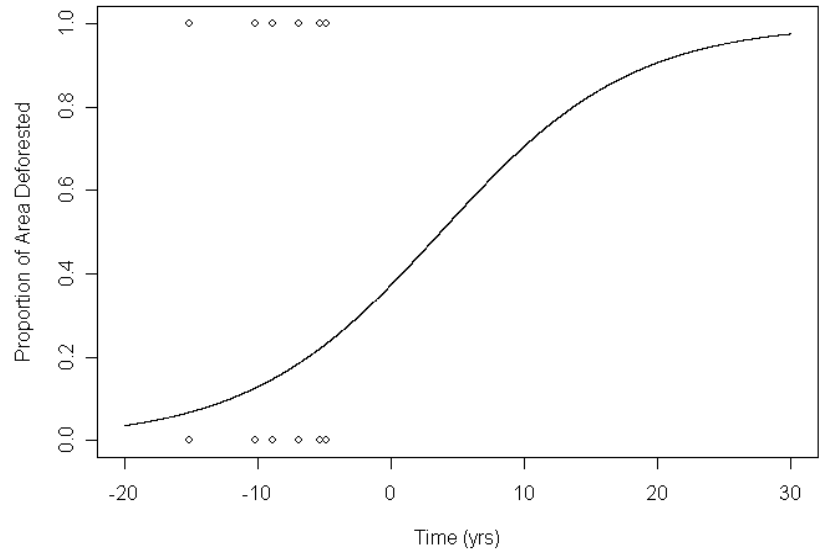
G2.3 – Carbon Stock Changes

The carbon stock change analysis approach used in this project is one based on actual historical deforestation of the project area, that was quantified using the approach described in VCS methodology VM0009 *Methodology for Avoided Mosaic Deforestation of Tropical Forests V1-0*, which uses historical remote sensing imagery and a grid based classification approach to determine historical deforestation rate in the project area.

This is the process developed by our own VP Carbon Development Jeremy Freund, who has many years of remote sensing experience in the field of natural resource science.

The loss of carbon in the baseline for above and belowground biomass trees, shrubs and grasses was assumed to be 100% of the starting inventory for the deforested area, as allowed under UNIPCC, as the likely scenario in the post deforestation baseline is annual crops.

Therefore, the GHG emission reductions under the project scenario for above and belowground trees, shrubs and grasses in any given year is determined by the Cumulative Deforestation Model derived from the historical logistic deforestation curve shown below;



Cumulative Deforestation Model derived from historical imagery from the reference region

The results of this analysis are presented in a VCS Net Emissions Reductions (NERs) spreadsheet provided as a supporting document to the validators. Total net NERs for this verification period are also listed above, in section G1.4.

For soil carbon, we must use a separate model, as unlike with forest carbon, complete soil carbon loss does not occur in the baseline scenario. We again followed the VCS methodology *VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests V1-0* for soil carbon, which dictates a decay curve that eventually settles on a mean loss value for soil carbon lost through clearing of agricultural land. We measured soil carbon in a number of proxy sites immediately adjacent to the project area, on farm land with identical soil, rainfall and climate, that in all cases had been forest less than 20 years before. The sampling methodology was identical to that used for the soil carbon estimates within the project area: 1m pits dug in two lifts, 0-30cms and 31-100cms and samples from each layer were thoroughly mixed, bagged and sent to an independent soil testing lab for bulk density and soil organic matter (SOM) analysis. The results obtained are included in the supporting file Kasigau Corridor Phase II 1m Soil Analysis.xlsx.

This analysis yielded a mean difference in soil carbon between the “with project” and “without project” of 222 tonnes GHG per ha converted to farm land under annual crops, or a 49% reduction in soil carbon value on conversion.

Summarizing for all pools the GHG loss in Baseline is;

Pool	Total GHG	Loss in Baseline over 30 years
Aboveground and Belowground forest biomass (trees,shrubs,grasses)	15,944,631	14,534,964
Soils	77,267,600	34,794,684
Total	93,212,231	49,329,648
Annual loss over 30 years (m.t. GHG) – GROSS NERs		1,644,322

G2.4 – How Would the Baseline Affect Communities

Please refer to this section in the Project Design Document.

G2.5 – How Would the Baseline Affect Biodiversity

Please refer to this section in the Project Design Document.

G3. Project Design and Goals

G3.1 - Major Climate, Community and Biodiversity Objectives

The Kasigau Corridor REDD Project aims to leverage the financial support of the global carbon marketplace to;

- Prevent the *gross* emission of over 49,000,000 tonnes of CO₂e over the 30 year crediting period of the project by preventing any further deforestation of the project area and surrounding project area.
- Add financial sustainability to the expansion of the world class conservation project that has been protecting biodiversity, avoiding deforestation on Rukinga Sanctuary and providing substantial community development benefits in the project area, so that we may continue through the project crediting period and hopefully well beyond to protect the area's magnificent biodiversity.
- prevent the loss of spectacular biodiversity and protect the area as a wildlife corridor for important indigenous species such as African elephant (*Loxodonta africana*), Cheetah (*Acinonyx jubatus*), Grevy's zebra (*Equus grevyi*), African hunting dog (*Lycaon pictus*), Lion (*Panther leo*) and 50 other large mammal species both by direct protection of our Rangers within the project area and through our influence, in the project area
- expand the influence of Wildlife Works into the surrounding Dryland Forests within the Kasigau Corridor that are under similar threat to Rukinga and that are community owned, and not currently in a position to make the investments that Wildlife Works has made in biodiversity protection by co-venturing with those community landowners in Phase II of the Kasigau Corridor project
- Manage the protection of over 400,000 acres of Dryland Forest in the Kasigau Corridor to maximize biodiversity values, and provide substantial co-benefits to community members who in some cases have never received any financial income from their forested lands
- Invest the proceeds of the carbon project back into alternative livelihood creation for people in the surrounding areas so that pressure on the forest is removed
- to ensure long term community support for the conservation of the Forests and wildlife through educational outreach in issues such as alternatives to slash and burn etc.
- Expand our organic greenhouse to implement community based nurseries to provide agricultural and fuelwood growing alternatives that remove the need of the local people to deforest the Land and surrounding areas.
- Identify, educate and implement community woodlots in the community lands this should avoid deforestation and enrich areas in the project area.
- Jojoba – initializing a campaign to introduce jojoba as a non conflict cash crop into the existing largely agricultural communities.
- Education and awareness programs through women's groups, schools and existing community forums such as Marungu Hills Environment Association
- As biodiversity returns identifying, researching, construction and marketing of Kasigau Corridor ecotourism projects.
- Expand our innovative Ecocharcoal project to provide a viable cost effective substitute to firewood and lump wood based bush charcoal to meet the fuel consumption needs in the local communities surrounding the Kasigau Corridor REDD project.

G3.2 - Major Project Activities

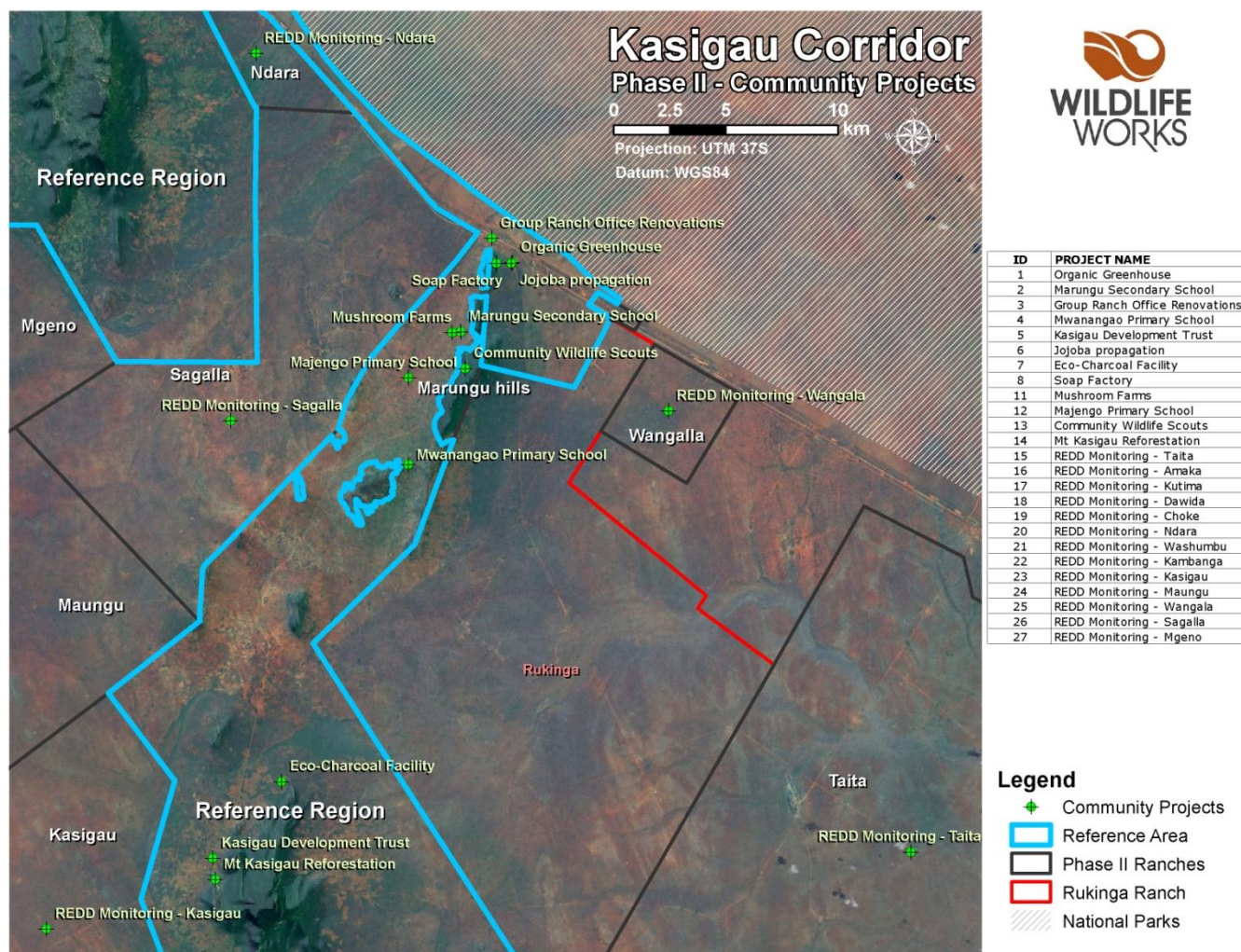
Wildlife Works has been engaged in the project area for over ten years, and unlike NGOs that typically set up projects, leave the area, and pay sporadic visits to "see how things are going", Wildlife Works has had employed a hands-on approach since the very beginning of our presence in Kenya. The company employs over 150 local people in a range of activities that we will continue, and in some cases significantly expand, with carbon financing. Such activities include;

Wildlife Works Sustainable Development Initiatives

Wildlife Works has implemented a wide range of sustainable development initiatives in the project area over the past ten years, and is committing to continue with a new range of innovative co-benefits for the communities that are in the project area upon receipt of funding for Phase II of the carbon project. These initiatives collectively form the basis of our carbon offset leakage avoidance strategy, and an implementation schedule for these Project Activities, with timelines and budgets was shared with the validator. The following is a list of project activities that have been initiated during the first verification period: January 1st, 2010 to December 31st, 2010. These activities have been supported using carbon funds from Phase I of this project. More detailed descriptions of these activities can be found in the respective Climate, Community and Biodiversity sections later in this report.

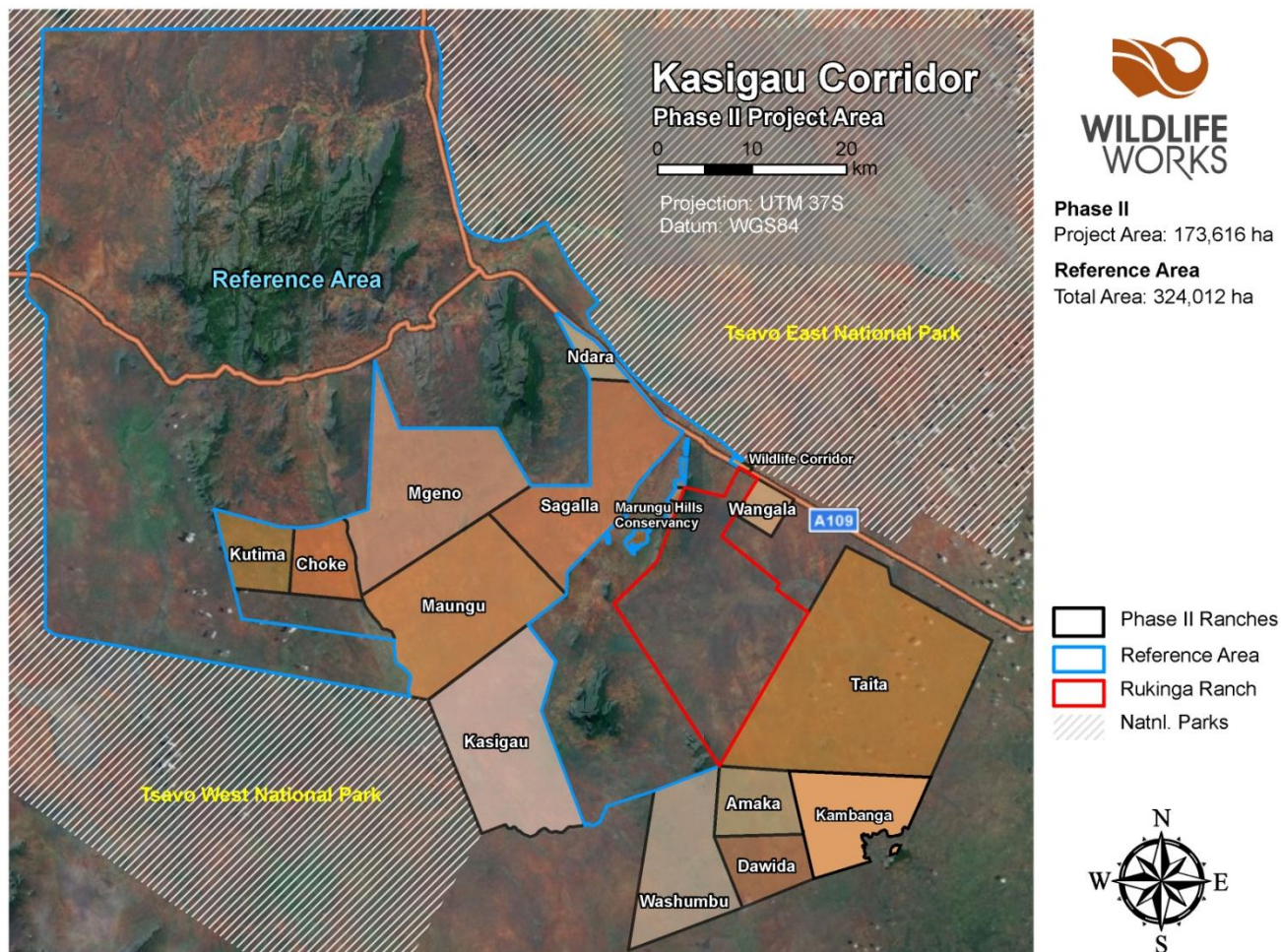
- Organic Greenhouse
- Financial Aid to Marungu Hill Conservancy Association
- Jojoba propagation & extension into the Community
- Mushroom Farms from Elephant Dung
- Reforestation of Mt. Kasigau
- Wildlife Works REDD Forest and Biodiversity monitoring
- Community Wildlife Scouts
- Kasigau Development Trust
- REDD Carbon Inventory Monitoring
- Ecotourism Projects
- School Construction and Bursary Scheme
- Group Ranch Office Renovations / Construction
- Wildlife Works Eco-Charcoal Production Facility for the Kasigau Corridor REDD Project
- Wildlife Works/Tsavo Soap Factory
- Wildlife Works REDD Project Product Sales and Marketing

The following map shows the location of the projects implemented during this current verification period, January 1, 2010 through December 31, 2010:



Major project activities commenced in the current verification period

G3.3 – Location of Project Activities



The project area for the Kasigau Corridor REDD project Phase II is illustrated in the map above and in Annex 1; The corresponding group ranch identities are shown above. Remaining dryland forested areas within the scope of the project (project area) include:

Phase I:

Rukinga Ranch

Phase II:

Taita Ranch

Kambanga Ranch

Kasigau Ranch

Maungu Ranch

Mgeno Ranch

Sagalla Ranch

Ndara Ranch

Amaka Ranch

Dawida Ranch

Washumbu Ranch

Choke Ranch

Kutima Ranch

Wangala Ranch

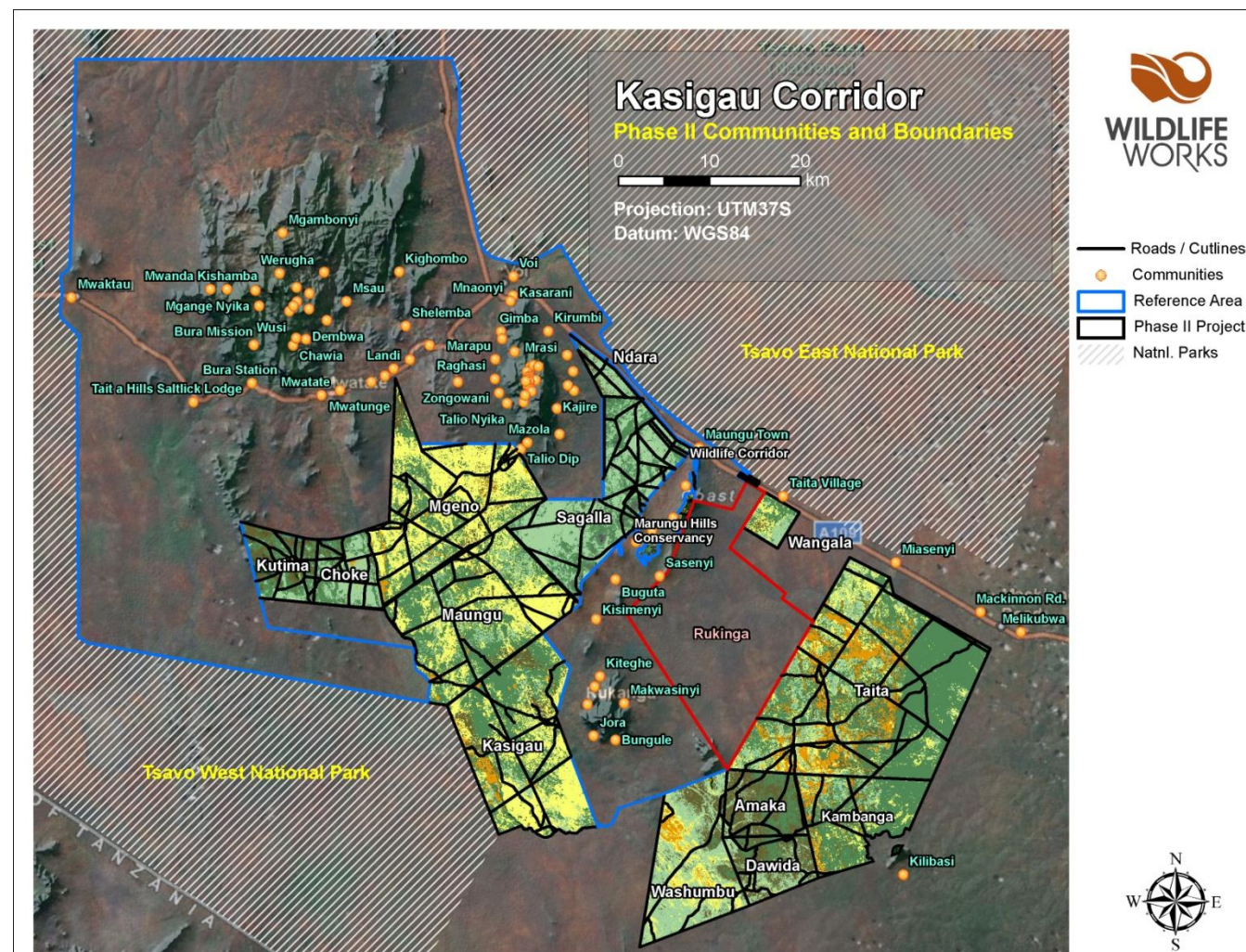
Marungu Hills
Conservation Area

Wildlife Corridor Link

Phase III:

Any other ranches that do not qualify for REDD, but may potentially qualify under new Avoided Grassland conversion methods being developed under VCS by Wildlife Works, which we believe are necessary to ensure the proper conservation management of the area.

The communities impacted by this Phase II project will be those of Phase I plus the Southern population of Mt Kasigau, and the populations of Kilibasi in Kwale District, Teri Ranch, Mwatate and the populations of McKinnon Road along the Mombasa highway:



Communities within the scope of influence of the Phase II project.

G3.4 – Time Frame and Project Accounting

Please refer to this section in the Project Design Document.

G3.5 – Project Risks and Mitigation Measures

Please refer to this section in the Project Design Document.

G3.6. Maintenance of High Conservation Values

Please refer to this section in the Project Design Document.

G3.7. Measures Taken to Enhance CCB Benefits Beyond Project Lifetime

Please refer to this section in the Project Design Document.

G3.8. Stakeholder Involvement

Please refer to this section in the Project Design Document.

G3.9. Publicization of Public Comment Period

The Kasigau REDD Project, Phase II - The Community Ranches Project Implementation Report (PIR) has been posted for public comment on the CCBA website (<http://www.climate-standards.org>) and it will be open to comments for 30 days. The document was also made available to the public in hard copy during the public comment period, at our carbon offices in Rukinga, and at several other communities involved in Phase II, affording local stakeholders an opportunity to review the documents and to raise any issues.

The hours for the Carbon offices are 8:30 am to 4:45 pm Monday through Friday.

G3.10. Conflict Resolution

Please refer to this section in the Project Design Document.

G3.11. Project Financial Support

Please refer to this section in the Project Design Document.

G4. Management Capacity and Best Practices

G4.1. Project Proponent

Please refer to this section in the Project Design Document.

G4.2. Technical and Management Expertise

Please refer to this section in the Project Design Document.

G4.6. Employee Safety

Please refer to this section in the Project Design Document.

G4.7. Financial Health of the Implementing Organizations

Please refer to this section in the Project Design Document.

G5. Legal Status and Property Rights

G5.1. Local Laws and Regulations

Please refer to this section in the Project Design Document.

G5.2. Documentation of Legal Approval

Please refer to this section in the Project Design Document.

G5.3. Free, Prior, and Informed Consent

Please refer to this section in the Project Design Document.

G5.4. Involuntary Relocations

Please refer to this section in the Project Design Document.

G5.5. Illegal Activities

Please refer to this section in the Project Design Document.

G5.6. Carbon Rights

Please refer to this section in the Project Design Document.

CLIMATE SECTION

CL1 Net Positive Climate Impacts

CL1.1. Net Change in Carbon Stocks

For a detailed description of loss of carbon stocks due to slash and burn agriculture in the Baseline scenario see Section G2, above. Wildlife Works has been committed to the protection of this dryland forest ecosystem and the wildlife that calls it home, and with the addition of the carbon finance, we will continue our effective protection and expand our activities within the community.

Carbon stock changes are based on the VCS approved methodology *VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests V1-0*. The net changes in carbon stocks for the current verification period (January 1st, 2010 through December 31st, 2010) are summarized as follows:

Stratum	n	Area (ha)	Trees Carbon Mean (tCO ₂ e · ha ⁻¹)	Shrubs Carbon Mean (tCO ₂ e · ha ⁻¹)	Herbaceous Carbon Mean (tCO ₂ e · ha ⁻¹)	Total Strata Mean (tCO ₂ e · ha ⁻¹)	Total Strata Carbon Stock (tCO ₂ e)
dense Acacia / Commiphora forest	59	15,337.0	71.8	6.9	1.0	79.7	1,204,690
grassland / sparse shrubs	52	9,693.0	58.8	8.2	0.9	67.9	620,326
high montane forest	0	298.4	78.9	7.0	0.8	86.7	26,261
light acacia / Commiphora forest	126	47,346.6	94.2	5.4	1.1	100.7	4,575,862
low montane forest	15	581.2	80.6	7.8	0.6	88.9	51,242
medium Acacia / Commiphora forest	101	52,273.9	80.8	7.7	0.9	89.4	4,926,458
sparse Acacia / Commiphora forest	76	44,211.3	76.2	6.5	1.6	84.4	4,423,210
Total:	429	169,741.4					15,828,049

Total monitored forest carbon in the Phase II project area

Component	Value
Soil Reduction	769,090
Forest Reduction	489,348
Total Baseline Emissions Reduction	1,253,588
Uncertainty Deduction	0
Project Emissions	0

Emissions from Leakage	0
Gross Total NERs	1,253,588
NERs to Buffer Pool (20%)	250,718
Net Total NERs	1,002,870

Total emissions reductions for the current verification period (January 1st, 2010 through December 31st, 2010)

CL1.2. Net Change in non CO2 emissions

Please refer to this section in the Project Design Document.

CL1.3. Other non CO2 emissions from Project Activities

In the with-project scenario, a small amount of emissions result from the burning of diesel in patrol vehicles, however in the without-project scenario, this would be more than offset in our opinion by the emission from the agricultural practices which would follow conversion of the forest, in which there would be fertilizer, and annual emissions from burning of the agricultural waste.

As a result of comments from the CCB Auditors during Phase I, we are electing to provide a full carbon footprint analysis of the with-project scenario for Phase II (See table below).

Wildlife Works Kasigau Corridor REDD Project Carbon Footprint

<u>Kenyan Power Generation</u>		
	%	kg CO2e per kWh*
Fossil fuels	60%	0.86
Non Fossil Fuels (Hydroelectric, Geothermal)	40%	0
Average		0.52
* from US DOE statistics - no Kenyan stats available		
<u>Kenyan Water Supply</u>		
We are 100% gravity fed from Mzima Springs Pipeline	0	0
Footprint of pumping on site for our purposes included in electric power and generator fuel use footprint		
<u>EcoFactory</u>	<u>Units of consumption/yr</u>	<u>m.t. CO2e/year</u>
Power use (kWh)	9600	4.97
Organic Cotton Products(est. 100,000 units / year)	100000	102
6kg per 12oz garment during total lifecycle		
Estimated 75% post consumer purchase		
Therefore 25% crop to retail = 1.5kg		
Organic Cotton footprint 68% conventional		
(Sustainable Cotton Project) = 1.02kg		

Carnegie Mellon Economic Lifecycle Analysis	\$500,000	344
Tier 3 GHG Footprint for Cut and Sew Mfg.		
Carnegie Mellon University Green Design Institute. (2009) <u>Economic Input-Output Life Cycle Assessment (EIO-LCA) US 1997 (491) model</u> [Internet], Available from: < http://www.eiolca.net/ > [Accessed 31 Oct, 2009]		
Note this includes 114 mt for power generation which we have accounted for primary consumption elsewhere.		
Also includes 14 m.t. for non cellulosic materials (e.g. synthetics which we do not use) in addition to 5.9 m.t for organic cotton which we do use.		

While we believe there are many flaws in the Carnegie Mellon example as it relates to our project, (e.g. organic cotton use, very low power generation at primary business activities as demonstrated by actual power usage used in this table, etc.) we choose that method for calculating the factory footprint over the sustainable cotton project method above, as it yields a more conservative result. We have provided the validator the full Carnegie Mellon analysis spreadsheet.

	Units of consumption/yr	m.t. CO2e/year
<u>Wildlife Sanctuary</u>		
Ranger Support Petrol/Diesel use (Ltrs/year)	15000	40.04
(note we use some petrol and more diesel so to be conservative we will assume 100% diesel as petrol has lower CO2e 2.7 kg/ltr diesel vs 2.3 petrol)		
CO2e lbs per gallon diesel (US EPA/UNIPCC 2006)	22.2	
CO2e kgs per ltr diesel (US EPA/UNIPCC 2006)	2.7	
<u>Organic Greenhouse and Jojoba Project</u>		
Organic Fertilizer for 7 Greenhouses proposed	21000	0.1456
3000 fruit tree seedlings per year use 200kgs manure*		
500 jojoba bushes on our experimental 10 acres use 200kgs manure per year. If we assume jojoba outplanting on 1000 acres that gives 100x manure use	20000	2.08
We use no fertilizer on the indigenous tree seedlings		
.104 kgs CO2e per kg manure (UNIPCC 2006 at 1.5% Carbon conversion to methane)		
*Note that we make compost tea in sealed container, we do not apply manure directly to crops, so our footprint would be lower		

Also note that the CCB methodology only requires calculation of GHG footprint for use of synthetic fertilizers of which we use none.		
<u>Eco tourism</u>		
Guest house electricity(kWh)	2912	1.51
Water Pump House Electricity (kWh)	2389	1.24
Camp Water Pump Diesel included in Ranger Fuel use		
<u>Misc</u>		
Management Housing Electricity (kWh)	8681	4.50
Management Airline Flights	10	25
2500kgs CO2 e per round trip SFO to Nairobi		
<u>Total</u>		423.49
Percent of Project GHG emissions reductions		0.25%

Positive emissions reductions associated with the trees we will be planting will offset the GHG emissions from other project activities. Table 4.9 of the *UNIPCC 2006 Good Practice Guidance for LULUCF* gives a net annual biomass increment for natural forests in tropical dryland forest types ≤ 20 years old as 2.4 tonnes d.m. / ha / yr.

The density of Rukinga's forest was estimated at 6,000,000 trees covering 30,166 hectares. There are therefore approximately 200 trees per hectare, and the Phase II ecosystem is assumed similar to that of Rukinga, due to its proximity to Phase I (the Phase II ranches surround Rukinga on all sides). Applying this density to the reforestation project on Mt. Kasigau, the 20,000 trees we will plant in the first three years of the project activities represent 100 hectares of forest area, which equates to 2400 tonnes d.m per year. Using the variable 0.47 for the carbon fraction (Table 4.3 of the UNIPCC 2006 Good Practice Guidance for LULUCF – Tropical and Subtropical Forests), and 44/12 to convert to CO₂e, this yields 4,136 m.t. Co₂e per year sequestered by the indigenous trees to be planted under the Mt. Kasigau Reforestation project. This is approximately 10x the emissions calculated in the table above for the entire carbon footprint from project related activities. Adding the sequestration benefits of planting out 20000 jojoba bushes and the 20,000 fruit trees, whose fertilizer use was calculated above in negative emissions, the substantial net-positive benefit of the project becomes abundantly clear. We still plan to retire some of our own credits to officially offset the project's carbon footprint.

CL1.4. Net Climate Impact

We estimate this project would avoid an estimated 49MM tonnes of CO₂e over the thirty year life of the project, and therefore has an overwhelmingly positive climate impact. In CL2.3 below, we have laid out an aggressive leakage mitigation strategy with our project activities, and as a result, deemed it unnecessary to deduct for leakage, as in fact our leakage strategy will result in more net positive climate impacts. We will not claim these positive impacts in the

with-project scenario. Additionally, this project will account for any activity-shifting leakage identified under the VCS methodology *VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests V1-0*.

CL1.5. Avoid Double Counting

Please refer to this section in the Project Design Document.

CL2 Offsite Climate Impacts

CL2.1. Types of Leakage

Please refer to this section in the Project Design Document.

CL2.2. Mitigation of Leakage

Our activity shifting leakage strategy is fully described in the PDD. For the current verification period, the following components have been implemented;

Reforestation of Mt. Kasigau

At the time of writing this document, 2000 seedlings were out planted on Mt. Kasigau. We have planted more than 20,000 seedlings in the Kasigau Corridor to date.



Outplanting on Mt. Kasigau

Wildlife Works established 5 permanent vegetation plots on Mt. Kasigau in 2005. We will continue to monitor those plots, observing any deforestation or regeneration. We will utilize plots in nearby locations to monitor the same metrics within the project area to determine project effectiveness (i.e. ensure that leakage from the mountain has not occurred).

This outplanting effort is part of a 3 year reforestation project on the slopes of Mt. Kasigau, working closely with the Kasigau Conservation Trust (KCT) to plant 20,000 indigenous hardwood trees over the next three years in one of the project zone's HCV areas, to replace trees taken out for charcoal or construction over the past years.

REDD Carbon Inventory Monitoring

For this first verification period, we have just completed 100% sampling of the biomass plots for the validation report for Phase II. Additional sampling will be completed for the next verification period, Jan 1st 2011- December 31st 2011, during which time we will revisit 20% of our forest plots to resample the inventory (to achieve 100% of the plots sampled every 5 years).



Mwololo Muasa, biomass plot team leader, ponders a dbh measurement

We have also made a significant investment in equipment by supporting the purchase of a gyrocopter by our VP African Operations, Rob Dodson, which will be used to perform aerial monitoring every week, both for forest health and to prevent loss of biodiversity.

Wildlife Works Eco-Charcoal Production Facility for the Kasigau Corridor REDD Project

Wildlife Works advanced funding for this critically important project activity, enabling work to begin prior to validation and verification and receipt of carbon funds from Phase II. The results of the three phases of work were analyzed and conclusions developed about the best way forward for the production of EcoCharcoal in the Kasigau corridor.

A full budget for implementation of the project recommendations was produced and are included in a supporting document called "Wildlife Works EcoCharcoal Project Activity Design Document" which was provided to the validators.



A batch of ecoCharcoal completed and ready for testing

The Kasigau Corridor REDD project has now created an economic incentive for the landowners and communities within the corridor to protect their forest. Wildlife Works is now working with the landowners and local communities to implement forest management plans that exclude the destructive use of forest resources for fuel wood or charcoal, and as a result, the supply of “free” wood for local charcoal use will be greatly reduced.

After surveying hundreds of people at all elements of the value chain, we determined that low impact community based charcoal production can indeed offer a sound alternative to ecologically damaging practices, such as hardwood extraction for lumpwood charcoal from primary forest destruction which is often accompanied by bush meat (hunting of wildlife species).

CL2.3. Unmitigated Negative Offsite Climate Impacts

Please refer to this section in the Project Design Document.

CL2.4. Unmitigated Negative Offsite / Non CO₂ Climate Impacts

See Section CL1.1 for a complete analysis of GHG emissions, both CO₂ and non-CO₂. Non-CO₂ gases account for far less than 5% of emissions, and are easily offset by mitigation activities described in CL1.1.

CL3 Climate Impact Monitoring

CL3.1. Carbon Pools to be Monitored

The following Carbon Pools will be monitored, as specified under the VCS methodology *VM0009 Methodology for Avoided Mosaic Deforestation of Tropical Forests V1-0*:

Pool	Required	Included in Project?	Justification
Above-ground large tree biomass	Yes	Yes	Major pool considered
Above-ground small tree biomass	Yes	Yes	Major pool considered
Above-ground non-tree biomass	Optional	Yes	Major pool considered
Below-ground large tree biomass	Optional	Yes	Major pool considered
Below-ground small tree biomass	Optional	Yes	Major pool considered
Below-ground non-tree biomass	Optional	Yes	Major pool considered
Litter	No	No	Conservatively excluded
Standing dead wood	Optional	Yes	Major pool considered
Lying dead wood	Optional	No	Conservatively excluded
Soil	Optional	Yes	Major pool considered
Long-lived wood products	Yes	Yes	May be a significant reservoir under the baseline scenario

The purpose of our carbon monitoring plan is to ensure;

- That the project has protected the dryland forest within the project area from any unplanned GHG emissions during the project crediting period, and;
- that no identifiable leakage has occurred that can be attributed to this project.

Emissions reductions calculations were based on two models, both according to the aforementioned VCS methodology. The first is a current carbon inventory of the project area land, conducted using a stratified-random, fixed permanent plot methodology, accepted by all as a more accurate method for forest carbon inventory than remote sensing, and the second being the use of satellite imagery for 15 years prior to the beginning of the project, clearly and empirically demonstrating the deforestation rate in the project area.

For the first model, it is our intention to carry out annual resampling of 20% of the total number of permanent plots originally created for the forest inventory, on the anniversary of the initial inventory, to ensure minimum seasonal variability in carbon stocks, which in this part of Kenya can be considerable. We plan to re-measure diameter at breast height (dbh), height, and status of all the trees originally included in the inventory for each plot. The annual resampling will be rotated so that every five years we have performed a complete resampling of the forest. We will also fund the external auditors of our project to revisit our permanent sample plots on a 5 year timetable.

We have no specific plan for monitoring of the soil carbon pool, as we make the assumption that loss of soil carbon during the project within the project area would follow unplanned deforestation in the project area. Therefore, as long as we are monitoring the aboveground biomass pools, we will be able to calculate the net climate impact of deforestation on the belowground and soil carbon pools, which are in turn directly dependent on the monitoring of above-ground forest biomass.

For the second model, we will continue to use satellite imagery to monitor the presence or absence of further deforestation in the reference area and the leakage belt. Because the type of deforestation occurring in this ecosystem involves total removal of tree cover for slash and burn agriculture, it is simple to observe landcover change with remotely sensed imagery. We will acquire affordable high-resolution imagery to support this monitoring.

The carbon monitoring plan is further described in the Project Design Document as well as the VCS Project Description *The Kasigau Corridor REDD Project Phase II - The Community Ranches*.

CL3.2. Commitment to Monitoring Plan

Please refer to this section in the Project Design Document.

COMMUNITY SECTION

CM1 Net Positive Community Impacts

CM1.1. Estimate Impacts on Communities

Please refer to this section in the Project Design Document for detailed community impact information.

The following project activities have positively impacted stakeholder communities during this first verification period (January 1, 2010 through December 31, 2010)

Organic Greenhouse

We have established an organic greenhouse to grow citrus trees, which we sell at a discount to local farmers, so they may plant a tree for shade, that can also earn them income. We use the funds from the citrus sales to fund the growth and distribution of free agroforestry species, such as Neem and Moringa oliefera to local farmers, to meet their medicinal, nutrition and fuelwood needs.

Under Phase I of our project we expanded our core Greenhouse at Rukinga HQ to add a second Shade house and to double our capacity adding two additional greenhouse workers from the local community. Full details for this activity were provided to the validator in the Phase I PIR.



Left: Organic Tree Nursery Shade House / Right: Sylvester gathering seedlings for out planting

Phase II Nurseries are being sited and discussed now and will be in the communities of Maungu, Marungu, Sasenyi, Mukamenyi and Kisamenyi.

Jojoba propagation & extension into Community – a viable Jojoba and essential oil industry

In partnership with Kenya Agricultural Productivity Project (KAPP), Natural Aromatics Ltd, Rukinga Wildlife Sanctuary, Kenya Forestry Research Institute (KEFRI), and the Ministry of Agriculture a 2 year trial period exploring the use of Jojoba as an ideal cash crop in arid and semi-arid lands (ASAL) was completed in 2010. Wilson M Thangana, the project leader, had begun the project to research Jojoba from best propagation, to finished value added essential oil. These historical activities were covered under Phase I of the Kasigau Corridor REDD Project.

For Phase II we committed to producing a full business plan for an out grower operation within the local farming communities. This business plan had been held up due to lack of access to the original data from the 2 year research project, which was being held in a government department, but we have now been able to secure the data, and plan to begin the production of this business plan in the next Verification period.

This Activity also depends on the establishment of Phase II nurseries in order to allow local propagation of the Jojoba and to provide collection points for the farmers to deliver their seed to, and we expect significant activity in the next Verification Period once carbon revenues have been received.



On the left: Joseph Mwanganda, agricultural consultant reviewing progress, and on the right: Dr. Wilson Thagana and Cosmos

Financial Aid to the Marungu Hills Conservancy

The Marungu Hill Conservancy Association, a local CBO, approached Wildlife Works and asked that their Community Group be a part of the REDD Project. The Communities they represent are the immediate neighbors to Rukinga and Sagalla, and are an essential part of the success and sustainability of the project, so we agreed to explore closer working relationship with this CBO.

We have begun provide limited direct financial support for the Marungu Hill Conservancy Association described above, so that they can provide support and advice to the community on environmental issues.

Mushroom Farms from Elephant Dung

We have provided elephant dung from the Rukinga Sanctuary to a local women's group called the Imanyi Women's Group periodically, at their request, so that they can use the dung as a growing medium for their commercial mushroom farm. The farm is housed in a small shed within the women's group compound, and provides a good income to the group with no negative impact on biodiversity or land use.

School Construction and Bursary Scheme

When Wildlife Works arrived in this area, there were almost no schoolrooms, no books and no desks. None of the infrastructure needed for a decent education existed. We began with a school building program, and over the years we have partnered with the community and various donors, to build 18 classrooms throughout the district. We also build desks; our original Kenyan manager, Alice Ndiga launched a school bursary program, which she administers, that has sent dozens of local children through private high school, and several on to University. We made commitments under both Phase I and Phase II of this project to specific funding levels for these programs based on receipt of carbon revenues, and we have already made good on those commitments for Phase I but are waiting for carbon revenues for Phase II to implement those commitments.



Old Kale School – no floor, no desks, one mud room New School block built by Wildlife Works

Group Ranch Office Renovations / Construction

Wildlife Works provided funding to the ranches for this activity, as the ranch offices in many cases provide a cost effective place to establish security patrol accommodation. So far we have renovated 2 Ranch headquarters at Taita and Mgeno ranches, at a cost of approximately \$35,000. We have also renovated the ranger post at 6-0 on Rukinga Ranch, which will support local operations for phase II at a cost of \$40,000.

Wildlife Works/Tsavo Soap Factory

Under Phase I of this Project, we helped one of our management team to establish an independent Organic Handmade Soap Factory on the Rukinga HQ premises, to demonstrate a higher value use of the jojoba oil being produced in our Dryland Farming Scheme. For Phase II plans are underway to implement a new production of Moringa Oil based soaps for contract sale to UNICEF and the Body Shop.



Tsavo Soap Co. product ready for sale

Ecotourism

Taita Ranch Ecotourism

We have had talks with a number of safari tour operators in preparation for ecotourism on Taita Ranch already, and we provided financial assistance to the Taita Board of Directors in the form of advances against their future share of carbon revenues, to assist them with the legal fees incurred in litigation with the Somali cattle operator.

Kasigau Rangelands Trust and Ecolodge

Discussions are ongoing with Frank Omondi and David Odiga (Finch Travels) to secure the additional funding required to complete the construction of this Eco Lodge located on Kasigau Ranch.

Wildlife Works REDD Project Product Sales and Marketing

A job description has been produced and hiring efforts have begun for this important new role at Wildlife Works Kasigau Corridor Project. We expect the hire to be made soon. We expect to receive 30-40 C.V.s for this position.

Kasigau Development Trust

Chief Kizaka of the Kasigau community and Wildlife Works have facilitated the legal process that is necessary to get this CBO registered and up and running and we expect it to have a legal status by the end of April. This will then be the trust through which we will channel the Kasigau Location community portion of the carbon revenue.

Project Broad Environmental Impact, Household Income, Support for Conservation

We plan to assess these indicators by means of a Participatory Rural Appraisal, or PRA, which we are developing in conjunction with two post graduate students working on their theses in our Project Zone. A baseline survey will be conducted in 2011.

However we have implemented a Newsletter as a communication vehicle with the Phase II Communities.

Newsletters:

Since July 2010 we have been organizing a community newsletter that is written every 2 months with a 2,500 copies printed. Each location gets 500 copies that are distributed through the Local Area Chiefs and CBO's in the area. 500 to Marungu Hill using the Chief and the Marungu Hill Conservation Association office and elected community leaders who update each village regularly, 500 to Kasigau using the Chief and Kasigau Development Trust. 500 to Sagalla Hill using the Chief and sub-chiefs and SCARDA. 250 to Mwatate town sub- location, 250 to Mwachabo sub-location, and the remaining 500 copies are for distribution by Wildlife Works employees. Eric Sagwe the Head Ranger, distributes 250 through his rangers network, 50 copies are kept in the Carbon office and finally 100 sent to the District Commissioner Voi, 50 copies are sent to the District Officer, Voi, and lastly 50 copies to the District Officer Mwatate.

The idea behind the newsletter is to take the opportunity to inform our neighbours and the local communities, about the various activities of Wildlife Works on a regular basis. These have proven to be very popular, and an effective method of distributing information and our project objectives. The newsletters are translated into Kenya's two main languages, English and Kiswahili.

Information such as upcoming recruitments, tree planting, and tree seedling purchasing programs are all advertised in the newsletters, as well as up coming community meetings and general news. Contact numbers for key members of staff dealing with community issues, are also made available on the newsletters.

Marungu Hills Conservancy Project Proposal System

Wildlife Works has begun to solicit proposals for the use of Phase II carbon funds, and felt that one of the best ways to meet the community's needs was to help establish and work with a community trust which represents the wishes and needs of the community at large. The Marungu Hills Conservancy was established in 2009, assisted significantly by wildlife works in its incorporation, initial overhead costs and running costs. The conservancy has solicited a host of proposals to Wildlife Works, and we have, in turn, begun to allocate time and resources toward each of the projects we deem viable. The projects have not yet been funded, and are still in the evaluation stage, but upon Phase II carbon funding will be considered and ultimately funded, should they meet the mutual needs of the community and Wildlife Works.

CM1.2. Demonstrate no Negative Impacts on High Conservation Values

Please refer to this section in the Project Design Document.

Specific details are described in the "Kasigau Biodiversity Monitoring Plan", and "Kasigau Biodiversity Survey Report", also provided to the validator.

CM2 Offsite Stakeholder Impacts

CM2.1. Identify any Potential Negative Impacts on Offsite Stakeholders

Please refer to this section in the Project Design Document.

CM2.2. Plans to Mitigate Negative Impacts on Offsite Stakeholders

Please refer to this section in the Project Design Document.

CM2.3. Demonstrate no NET Negative Impacts on other Stakeholder Groups

Please refer to this section in the Project Design Document.

CM3 Community Impact Monitoring

CM3.1. Develop Plan for Community Monitoring

Organic Greenhouse Project – No data yet for Phase II – See CM 1.1 Above

Indicator - Number full time jobs

- Wildlife Works employees
- Total including in community (screen printing, etc.)

Indicator – Local Employment

- How many employees come from project area communities?
- How many employees come from outside project area communities?

Indicator – Financial Investment/Return

- Monies invested in capital expense (CAPEX) for new greenhouse / greenhouse expansion since REDD project began, 1st Jan, 2010.
- Annual operating expenses since REDD project began, 1st Jan, 2010.

Indicator – number of new greenhouse locations implemented

Indicator – number of trees propagated in greenhouse(s)

- total - all species
- fruit and agroforestry/fuelwood trees
- Indigenous trees for reforestation projects

Indicator – number of seedlings sold (species, quantity, customer, date, price)

- revenue
- profits

Jojoba/Dryland Farming Project – No data yet for Phase II – See CM 1.1 Above

Indicator - Number full time jobs

- Wildlife Works employees
- Total including in-community

Indicator – Local Employment

- How many employees come from project area communities
- How many employees come from outside project area communities?

Indicator – Financial Investment/Return

- Monies invested in capital expense (CAPEX) since REDD project began, 1st Jan, 2010
- Annual operating expenses on Jojoba Project since REDD project began, 1st Jan, 2010
- Income generated from Jojoba Project since REDD project began, 1st Jan, 2010.

Ecotourism in project area and reference region – No data yet for Phase II – See CM 1.1 Above

Indicator - Number full time jobs

- WW employees
- Total including in-community (Camp Kenya, etc.)

Indicator – Local Employment

- How many employees come from project area communities?
- How many employees come from outside project area communities?

Indicator – Financial Investment/Return

- Monies invested in capital expense (CAPEX) since REDD project began, including bursaries for local youth to complete Eco training
- Annual operating expenses since REDD project began, 1st Jan, 2010.

Indicator – Number of local youth put through Eco training Guide Training (course date, name, age, address, successful completion y/n)

School Construction and Bursary Scheme – No data yet for Phase II – See CM 1.1 Above

Indicator – Number bursaries for local children each year

- paid by WW
- paid by Kelimu, other
- Student name, village, age, primary school, secondary school/college/university, results
- Indicator – \$ invested in school construction and maintenance
- Fund amount, date, where used, number of children housed, outcome

Project Product Marketing and sales – No data yet for Phase II – See CM 1.1 Above

Indicator - Number full time jobs

- WW employees
- Total including in-community

Indicator – Local Employment

- How many employees come from project area communities?
- How many employees come from outside project area communities?

Indicator – Sales from project area and zone products (non carbon credit sales)

Soap Factory Expansion – No data yet for Phase II – See CM 1.1 Above

Indicator - Number full time jobs

- WW employees
- Total including in-community

Indicator – Local Employment

- How many employees come from project area communities?
- How many employees come from outside project area communities?

Indicator – Financial Investment/Return

- Monies invested in capital expense (CAPEX) since REDD project began, 1st Jan 2010
- Annual operating expenses on Soap Project since REDD project began, 1st Jan 2010
- Income generated from Soap Project since REDD project began, 1st Jan 2010

Section 2 - General Success Metrics Influenced by but not directly attributable to Wildlife Works

Education

Indicator - # children in each school

- total
- average number of children per classroom
- highest number kids per classroom

Indicator – grades of children in national exams and position in district by school

Indicator – number of children securing places in secondary school from each school

Education in the communities of Phase II falls under Taita Taveta and Voi Districts and more locally within the locations of Sagalla, Kasigau, Marungu, Mwatate and Mwachabo.

We received the following data form the District Education Officers, and plan to analyze the data more specifically for relevance to the Project Area and goals in subsequent verification periods.

Transition rates from standard eight (primary) to form one (secondary) 2010			
BOYS	2.6%		
GIRLS	2.3%		
TOTALS	4.9%		
Break down for form one (secondary) admission – 2010			
TYPE OF SCHOOL	BOYS	GIRLS	TOTAL

NATIONAL	4	4	8
PROVINCIAL	213	216	429
DISTRICT	236	226	462
EXTRA PROVINCIAL	-	-	-
PRIVATE	53	3	56
TOTAL	506	449	955

S/NO	VOI ZONE SCHOOL	ENROLLMENT B	T
1	G Sowa	180	341
2	G. Mosi	147	311
3	Gimba	119	228
4	Kajire	229	457
5	Kalambe	98	199
6	Kalela	347	730
7	Kileva	22	47
8	Kirumbi	136	254
9	Kizumanzi	150	305
10	Marie	33	72
11	Mlondo	123	231
12	Mwakingali	407	798
13	Mwambiti		
14	Mwamunga	532	1050
15	Mwanyamb o	550	1081
16	Priscila		107
17	Sagalla	89	187
18	Talio	47	104
19	Voi	626	1246
20	Wray	146	215
	TOTAL	3981	7963

NYANGALA ZONE Schools:

S/NO	SCHOOL	ENROLLMENT B	G	T
1	Buguta			977
2	Bungule			247
3	Itinyi			393
4	Jora			315
5	Kale			555
6	Kisimenyi			462
7	Kiteghe			183
8	Makwasinyi			363
9	Marasi			502
10	Marungu			480
11	Mbele			420
12	Miasenyi			213
13	Mkamenyi			398
14	Msharinyi			67
15	Ngambenyi			70

16	Rukanga	371
17	Sasenyi	560
18	Zunguluka ni	70
	TOTAL	6646

TAUSA ZONE				
S/NO	SCHOOL	ENR. B	G	
1	B. Mganga	79	102	181
2	Ghazi	120	81	201
3	Ikanga	110	98	208
4	Kambio	152	131	283
5	Kirindinyi	137	101	238
6	Kirutai	70	55	125
7	Manyani	77	59	136
8	Mbulia	123	115	238
9	Mkwachun yi	115	127	242
10	Mlundinyi	110	91	201
11	Mwakajo	116	101	217
12	Mwakiki	131	110	241
13	Mwakuni	26	29	55
14	Mwambole mbole	40	43	83
15	Ndile	140	137	277
16	Ndome	165	198	363
17	Ore	68	58	126
18	Tausa	57	83	140
	TOTAL	1836	1719	3555

SCHOOL	CODE	ENT	GRADE DISTRIBUTION													
			A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	X	Y
Voi	115101	122	0	0	1	1	10	20	33	32	15	8	1	0	1	0
Bartholomew	115202	48	0	0	1	1	5	8	8	7	9	6	2	0	1	0
Moi Kasigau	115301	54	0	0	0	4	4	6	12	8	11	5	3	0	1	0
OLOPS	115106	41	0	0	0	0	2	4	7	10	15	3	0	0	0	0
Mwangea	115102	103	0	0	0	2	1	9	13	21	28	20	8	0	1	0
Mwakitawa	115201	104	0	0	0	2	4	4	13	24	27	24	6	0	0	0
Jeansy	115108	17	0	0	0	0	2	1	0	1	5	3	4	1	0	0
Mwakichuchu	115105	80	0	0	4	0	2	3	4	8	12	27	20	0	0	0
David Kayanda	115204	32	0	0	0	0	1	0	3	4	10	8	5	1	0	0
Kajire	115103	46	0	0	0	1	0	2	3	8	10	10	11	1	0	0
Marungu	115302	13	0	0	0	0	0	0	0	1	5	4	3	0	0	0
Mwambiti	115104	75	0	0	0	0	1	1	1	3	22	26	19	2	0	0
Mwaghogho	115203	81	0	0	0	1	0	2	2	6	11	32	27	0	0	0
TOTALS 2010	115	816	0	0	6	12	32	60	99	133	180	176	109	5	4	0

TOTALS 2009	115	782	0	1	7	8	26	45	91	128	172	176	117	1 1	0	0
DEV.		34	0	-1	-1	4	6	15	8	5	8	0	-8	- 6	4	0

		M/SC	M/GRD	M/SC	M/GRD	DEV.
Voi	115101	5.6446	C	6.074	C	- 0.4294
Bartholomew	115202	5.4468	C-	5.108	C-	0.3388
Moi Kasigau	115301	5.4151	C-	4.591	C-	0.8241
OLOPS	115106	5.0	C-	5.324	C-	-0.324
Mwangea	115102	4.5098	C-	4.095	D+	0.4148
Mwakitawa	115201	4.5	C-	4.217	D+	0.283
Jeansy	115108	3.8824	D+	New		
Mwakichuchu	115105	3.875	D+	3.578	D+	0.297
David Kayanda	115204	3.7813	D+	3.125	D	0.6563
Kajire	115103	3.7391	D+	4.163	D+	- 0.4239
Marungu	115302	3.3077	D	2.545	D	0.7627
Mwambiti	115104	3.2267	D	3.022	D	0.2047
Mwaghogho	115203	3.1975	D	3.416	D	- 0.2185
TOTALS 2010	115	4.5031	C-	4.23	D+	0.2731

These tables show that only 5% of children that complete primary education are able to go on to secondary school. It is the goal of this project to increase this number over time.

At present the mean grade of secondary school leavers in the region is C-, as shown in the table above. It is our objective to improve this grade, by improving the facilities and teaching standards available in secondary schools.

Project Broad Environmental Impact - No data yet for Phase II – See CM 1.1 Above

Indicator – WW Project Popularity in Reference Region

- % community responding favorably to WW presence
- % community directly and indirectly benefiting from WW presence

Household Income - No data yet for Phase II – See CM 1.1 Above

Indicator – Household Income

- Average household income – dry and wet season

Support for Conservation - No data yet for Phase II – See CM 1.1 Above

Indicator – Environmental conservation support from the community

- % community understanding link between environmental protection/wildlife and economic progress

CM3.2. Develop Plan for HCV Monitoring

Please refer to this section in the Project Design Document.

Details are further described in the Kasigau Biodiversity Monitoring Plan, and Kasigau Biodiversity Survey Report, as provided to the validator.

CM3.3. Commit to Plan for HCV Monitoring

Please refer to this section in the Project Design Document.

BIODIVERSITY SECTION

B1 Net Positive Biodiversity Impacts

B1.1. Estimate Impacts on Biodiversity

Please refer to this section in the Project Design Document.

The following project activities have been implemented, provided a positive impact on biodiversity within the project zone:

Wildlife Works REDD Forest and Biodiversity monitoring



Wildlife Works rangers in uniform on daily patrol duties

This was the first financial commitment we made under Phase II of the project as soon as we had signed Carbon Rights Agreements with the first two group ranches, Kasigau and Kambanga in April 2009. We held ranger recruitment days in the communities of Kajire, Marapu, Landi and Makwasinyi in 2009 and 2010, hiring new rangers to patrol the Phase II ranches.

We also advanced funding for the purchase of two new patrol vehicles and received a third vehicle through our partnership with the David Sheldrick Wildlife Trust, all of which were deployed for the protection of the Phase II ranches during this verification period.

During this verification period, we've initiated a biodiversity monitoring program, which involves the monitoring of mammals in the project area. We wish to observe trends given the implementation of the project, as one of its main goals is to conserve biodiversity.

Patrick Kabatha manages this project and has begun conducting measurement activities, including line and aerial transects. Phase II will be monitored monthly, and metrics will include animal presence (various species), and this data will be geo-tagged to support spatial

distribution analysis. This project will focus on High Conservation Value (HCV) species, including the rare Grevy's zebra, leopard, gerenuk and lions.

Community Wildlife Scouts

Wildlife Works has hired scouts to monitor the community areas (8 so far in the Marungu Hills area). We will expand this effort into Kasigau, Mwatate and Sagalla loactions, hopefully creating community awareness and increasing knowledge about the value of conservation. These scouts are responsible for collaborating with the communities to curb the trend of deforestation degradation in the areas immediately surrounding the communities.

B1.2. Demonstrate no HCVs Negatively Impacted

Please refer to this section in the Project Design Document.

B1.3. Identify Species Used by Project

Please refer to this section in the Project Design Document.

B1.4. Describe Invasive Species Used by Project

Please refer to this section in the Project Design Document.

B1.5. No GMO Guarantee

Please refer to this section in the Project Design Document.

B2 Offsite Biodiversity Impacts

B2.1. Identify Potential Negative Offsite Impacts on Biodiversity

Please refer to this section in the Project Design Document.

B2.2. Document How to Mitigate Potential Negative Offsite Impacts on Biodiversity

Not applicable.

B2.3. Evaluate Potential Negative Offsite Impacts on Biodiversity

Not applicable.

B3 Biodiversity Impact Monitoring

B3.1. Develop Plan for Biodiversity Monitoring

Please refer to section B1.1. above for a description of Wildlife Works recently implemented biodiversity monitoring program

B3.2. Develop Plan for HCV Monitoring

The Kasigau Corridor is unlike most REDD project, as Wildlife Works rangers monitor the wildlife populations in the project area on a daily basis, and maintain a daily log of all wildlife sightings. We can monitor the health of the Phase II ecosystem, and the populations of the endangered species. However, with carbon finance, we propose to expand on the reporting we have been able to do on this important collection of research data, in three ways, outlined above in G3.2 Major Project Activities;

- improve our ability to monitor the HCV species in the project area by adding a dedicated Ranger Patrol, the HCV Ranger Team – this has been done in the form of the hiring of Patrick Kabatha as HCV Monitoring Specialist.
- improve monitoring of HCV species, by establishing a GIS center of excellence at Rukinga HQ to capture, process and report on wildlife data collected by the project. This center has been established at Rukinga HQ.
- 3 year reforestation and monitoring project on the slopes of HCV Mt. Kasigau (see documents Mt. Kasigau Reforestation Plan, Kasigau Biodiversity Monitoring Plan, and Kasigau Biodiversity Survey Report submitted to validator). This program has started in earnest during the current verification period (see section Climate Section CL2.2 Mitigation of Leakage).

B3.3. Commit to Plan for Biodiversity Monitoring

Wildlife Works completed a full detailed monitoring plan within twelve months of validation against the CCB standards and after the first Verification period, we will now make that plan available to the public on the internet. We will also communicate the plan to local community groups for dissemination to the wider community, as has been our approach to all communication throughout the project lifetime.

Indicator - Number full time jobs

- WW employees
- Total including in-community

Indicator – Local Employment

- How many employees come from project area communities
- How many employees come from outside project area communities?

On 5th March 2010 a recruitment day was held at Rukinga HQ and over 500 local community members came to participate. 70 rangers qualified, but as of end of 2010 only 30 rangers have been employed – please see list below that clearly shows where they are from:

RANGERS RECRUITMENT	NAME	FROM	LOCAL EMPLOYMENT
Phase I			FROM PROJECT AREA
1	Stephen Mswahili	Makwasinyi	Yes
2	Elemu Lokichari	Miasenyi	Yes
3	Simon Kiprop	Taita Ranch	Yes
4	Boniface Mnyambo	Wildlife Works	Yes
5	Nicholas Rono	Taita Ranch	Yes
6	Dominic Kivuva	Maungu	Yes
7	Peter Anelico	Mwambiti	Yes
8	Emmanuel Ndurya	Kale	Yes
9	Mohamed Abdalla	Maungu	Yes
10	Fredrick Kyalo	Mackinnon Road	Yes
11	Joshua Thurania	Maungu	Yes
12	Daniel Ngazi Kombo	Itinyi	Yes
13	Juma Chiboya	Sasenyi	Yes
14	Crispin Mazazo	Mwatate	Yes
15	Paul Msheshe	Sagalla	Yes
16	Evans Mwachoki	Maungu	Yes
17	Ayub Lalo	Mackinnon Road	Yes
18	Omari A Wanjala	Maungu	Yes
19	Stephen Mwalimo	Kibaoni	Yes
20	Jackson Ngiyo	Marungu	Yes
21	Peter Nyamoko	Lockichogio	Yes
22	Moses Lorewa	Taita Ranch	Yes
23	Lalo M Lalo	Mackinnon Road	Yes
24	Mohamed Rai	Sasenyi	Yes
25	Cassion Mwakio	Maungu	Yes
26	Hassan Lugwe	Sasenyi	Yes
27	Augustine Mjomba	Buguta	Yes
28	Michael Mulozi	Itinyi	Yes
29	David Mwakuro	Rukanga	Yes
30	John Lopeyo	Samburu	Yes

We have no employees in the WW Rangers team who hail from outside the Project Area Communities.

We held recruitment days for the Phase II communities in 4 locations: Kajire (Sagalla Hill, Kishamba sub-location) on the 5th November 2010, Marapou (Sagalla Hill, Talio sub-location) on the 6 November 2010, Landi in Mwatate on the 9th November 2010, and finally Makwasinyi, Kasigau location on 12th November 2010.

In total 490 members of the community participated, of which 121 were Ladies. Out of all the participants 30 were shortlisted and qualified to be rangers by end year 2011. Of the 30, 8 have been employed- see list below that shows where they come from in the project area:

RANGERS RECRUITMENT			LOCAL EMPLOYMENT
Phase II	NAME	FROM	FROM PROJECT AREA
1	Jane Mwae	Bondeni	Yes
2	Constance Mwanda	Talio	Yes
3	Grace Manga	Rukanga	Yes
4	Florence Ngoro	Mkamenyi	Yes
5	Ramadhan Galagola	Rukanga	Yes
6	Joseph Mnyolo	Landi	Yes
7	Bernard Mwatate	Marapu	Yes
8	Harrison Mwatibo	Kajire	Yes

As you can see all employees are from local communities and none of the employees come from outside the project area.

Indicator – Financial Investment/Return

- Monies invested in capital expense (CAPEX) since REDD project began, 1st Jan, 2010.

Communication/Radios- Base station radios were purchased for Taita Ranch, Mgeno Ranch and Kasigau Ranch, along with 2 vehicle radio base stations. **Total cost \$4500**

5 Handheld patrol Radios were purchased. **Total – \$1,500**

Rangers Patrol Vehicles - Two new land cruiser pickups were purchased in April 2010 for ranger patrols. Total combined cost: **\$96,000**

Project-6.0 Rangers post:

This is the largest of the rangers' posts in the project area, and was constructed and situated tactically, to cover the Southern sides of the Phase I area. The rangers station which provides accommodation and catering for up to 18 security personnel, came to a cost of **\$37,000**.

Project- Refurbishment of Taita Ranch Headquarters and Rangers post.

In April 2010 accommodation for 12 Wildlife Works rangers was refurbished, office space, solar systems and radio base stations were also installed. All employees on the construction team are local craftsmen. **Total Construction Cost : \$7,500**

Project- Refurbishment of Mgeno Ranch headquarters and rangers post.

In February 2010 accommodation for 12 Wildlife Works rangers, offices, boardroom, water tanks were refurbished. Additional water tank was added along with solar lighting and radio base station. All employees on the construction team are local craftsmen. **Total Construction**

Cost: \$ 9,500

Project- Finalize refurbishment of Kasigau Rangers post.

In June 2010 accommodation for 8 rangers was refurbished on Kasigau ranch. Solar lighting, building completion and refurbishment. All employees on the construction team are local craftsmen. **Total Construction Cost: \$3000**

Indicator – Financial Investment/Return

- Annual operating expenses since REDD project began
 - annual operating costs since 1st Jan, 2010.

FROM 1ST JANUARY 2010 TO 31ST DECEMBER 2010 Ranger expenses and supporting administration	
Particulars	Amount in \$
Bank Charges	160.00
Donation	2,000.00
Insurance	2,000.00
Licences & Permits	2,500.00
Motor Vehicle Expenses	10,000.00
Motor Vehicle insurance	2,300.00
Fuel & Oils	19,000.00
Motor Vehicle Spare	2,000.00
Motor vehicle hire	250.00
Newspapers	30.00
Office Supplies	2,750.00
Salaries & wages	45,000.00
Printing & Stationery	1,300.00
Legal fees	1,850.00
Secretarial fees	190.00
Repairs & Maintenance -Building	12,000.00
Repairs & Maintenance -Equipment	500.00
Security	500.00
Staff Expenses	1,500.00
Medical expenses	2,000.00
Telephone Expenses	2,500.00
Traveling Expenses	2,000.00
Electricity Expenses	1,700.00
Water Expenses	12,000.00
Work Permits	1,000.00
Total	127,030.00

Indicator – Species Population Statistics;

- Sightings (date, GPS location, species, #male, #female, #young, seen by)

Indicator – HCV Species Population Statistics;

- Sightings (date, GPS location, species, #male, #female, #young, seen by)

Rangers have recently (March 2011) undergone full GPS training, in order to be able to geotag species sightings within the project area. The GPS located data will be included in our next verification period PIR. Each Ranger team has been filling out daily patrol logs and that data is being captured in an MS Access database and will be processed early in 2011 to be included on our next verification period PIR.

Indicator – Number of poaching incidents

- Number of snares or traps found (GPS location, date, type, quantity)
- Number of dead animals captured (GPS location, date, species, quantity)
- Number of poaching arrests made (date, perpetrator name, arresting ranger, offense)

Indicator – Number of cattle grazing incursions

- Number of charcoal, fuelwood or construction material incursions

Indicator – Number of incidents in all 13 Ranches for Phase II

Table 1 (below)- The table below represents total number of incidents for Phase II of Snares collected, Poaching incidents, Cattle incursions, Elephant Killed, Dead animals discovered, and charcoal timber incursions across the entire project area. Data is recorded daily from Rangers patrol sheets and entered into our local database. The great majority of dead animals found were small antelope confiscated during bush meat poaching arrests. The Charcoal and Firewood count includes each bag of charcoal, each kiln, each charcoal arrest made. The Poaching Incidents represents each time a snare was found, each time a bushmeat arrest or trespass occurred, each time a bushmeat incident occurred, e.g whether or not we caught the poachers, each time a dead animal was found (but not a count of the animals), each time a cut log was found (but not the count of trees cut) etc.

PHASE II		Poaching	Cattle	Elephants	Dead	Charcoal &
Year	Snares	Incidents	Incursions	Killed	Animals	Firewood
2010	1595	1095		6	365	3410

Indicator – acres deforested in project area and Zone

Zero (0) hectares in the Project Area were deforested during this verification period. Measurement of deforestation in the Project Zone will be measured when the Baseline reevaluation is done in year ten of the project, as per the standard.

Indicator – acres reforested in community land

- number of indigenous trees successfully outplanted in villages within project zone
 - number outplanted by species
 - number surviving to year 2 by species
 - number surviving to year 3 by species
- number of indigenous trees successfully outplanted on Mt. Kasigau
 - number outplanted by species
 - number surviving to year 2 by species
 - number surviving to year 3 by species

Phase II - Reforestation project:

The Kasigau Corridor REDD project has now created an economic incentive for the landowners and communities within the corridor to protect their forest. Wildlife Works Carbon will be working with the landowners and local communities to implement forest management plans that exclude the destructive use of forest resources. In the green house project local communities are encouraged to raise indigenous tree seedlings in their own home made nursery in different containers and will be purchased by wildlife works carbon for nurturing them to the right size then they will be taken back to the communities to be planted in the denuded land and in their farms (based on the agriculture policy on 10% tree cover in farm area) for the purpose of increase tree cover which will help to reduce forest degradation. In this the community will have double benefit of economic empowerment and biodiversity conservation.

Indigenous Tree seedling purchasing program:

The indigenous tree nursery project in phase II has the objectives of community economic empowerment and biodiversity conservation/ecosystem restoration in the Project Zone. In December 2010 we purchased seedlings from lower Sagalla. The 2 points of seedling collection were at Talio and Kajire.

The table below shows the species and quantities purchased from the community.

Species name	Quantity
A.robusta	56
M.volkensii	229
L.schweinfuethii	501
Leaucena spp.	122
A.nilotica	201
T.indica	2
C.megalocarpus	11
A.mellifera	3
Syzygium cuminii	32
S.birrea	153
TOTALS	1310

Community benefits

In Sagalla community there were very few members of the community who raised seedlings, this is the reason why they had less benefit compared to other areas. Talio Nyika had the highest with \$95 and Kajire the least with \$81.

Community	Benefits in Kshs	Amount in USD
Kajire	6,505	81.3125
Talio	7,600	95
Totals	14,105	176.3125

Upper Sagalla-Phase 2 project area

Nayabingi sports club, these are youth who came together for sports but on top of that they have a passion for environmental conservation as they nurture their different talents. Through them we managed to plant 1000 tree seedlings in upper Sagalla. These seedlings were bought locally from the surrounding community who had seedlings in the area.

Summary of tree seedling purchase and community benefits

Supplier	Community Purchased	Total Tree seedlings	Cost for purchases	Community benefits in USD
L.Mwanyumba	Teri	250	5000	62.5
J.Kodi	Teri	300	6000	75
A.Mwata	Teri	200	4000	50
J.Mwachofi	Teri	200	4000	50
C.Kipande	Teri	50	1000	12.5
Total		1000	20000	250

In this program Teri community benefits were \$250 in tree seedling purchased

The species mix include:

Apart from croton spp. The other species are in local language (Sagalla) we are still on the process of identifying their names, but croton species was the highest sales from the community.

Species	Quantity
Croton Pseudopulchellus	850
mwera	50
Ndido	50
Mvuranje	50
Totals	1000

Summary of tree seedlings distributed see table below:

Planting sites	Community	Total Supply
Talio Primary	Talio	150
ACK Talio	Talio	100
Wray Primary	Teri	200
Mlondo Primary	Teri	200
Sagalla Primary	Kishamba	200
R.Mwangala	Teri	50
A.Mwagunga	Teri	100
	Total	1000

Survival rate

The survival rate for the saplings in upper Sagalla is 80%. The saplings are 6 month old. This is due to the strategy of each pupil to take care of 1-3 seedlings in the school compound.

GOLD LEVEL SECTION

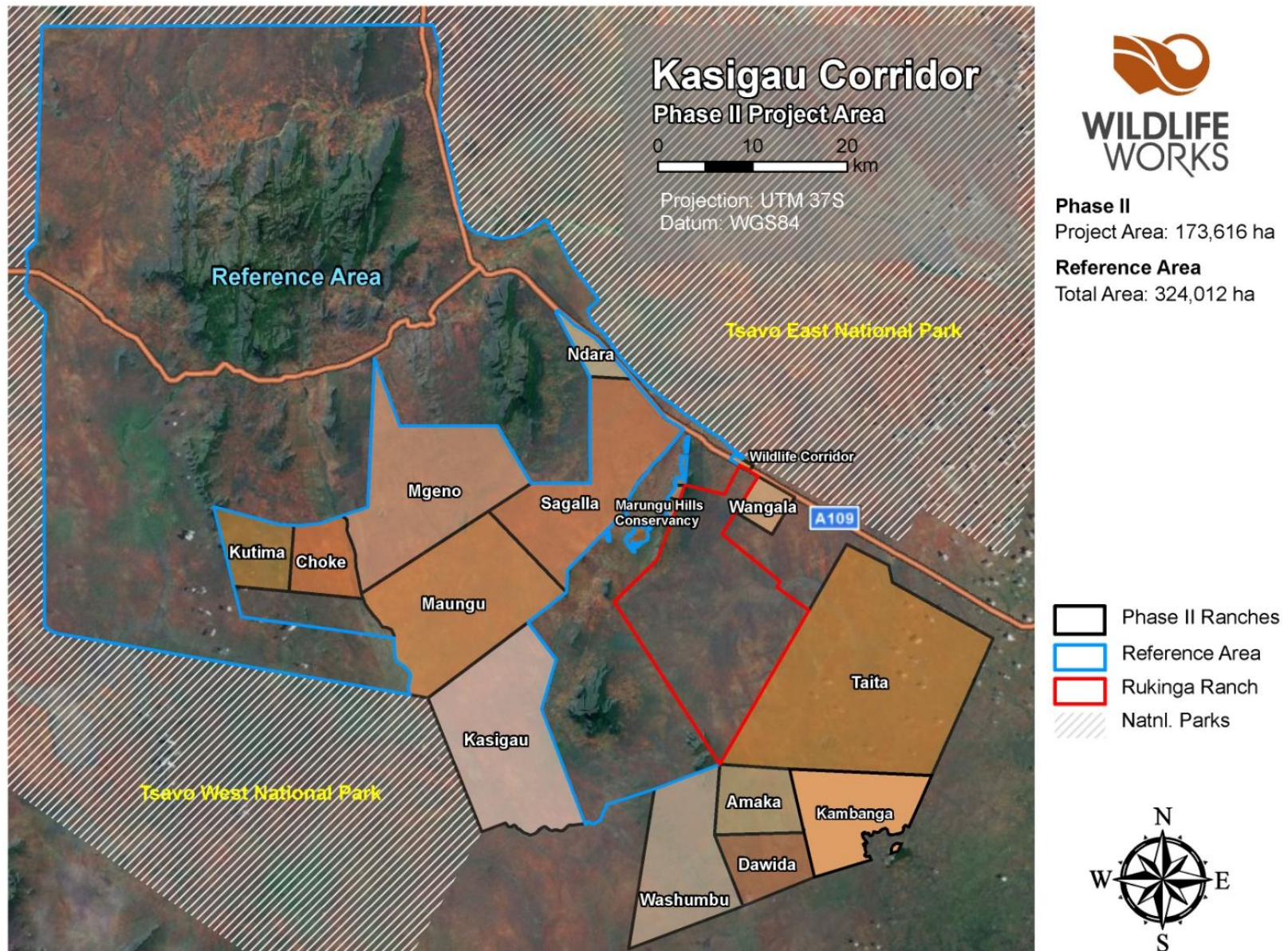
GL1. Climate Change Adaptation Benefits

GL1.1. Identify Likely Climate Change impacts

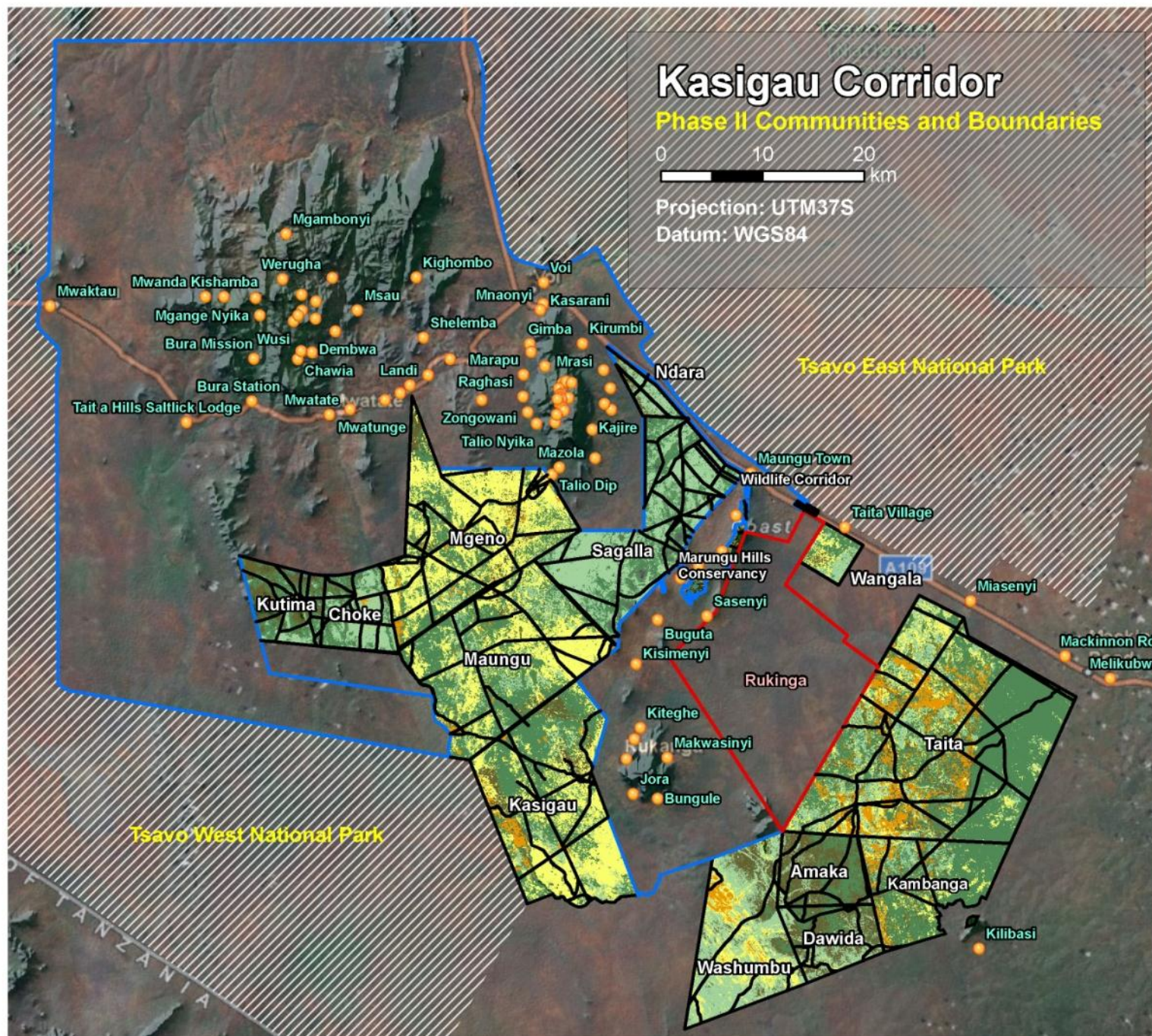
Please refer to this section in the Project Design Document.

ANNEXES

Annex 1 Maps of project area



Project area and ranch boundaries – Kasigau Corridor REDD Project Phase II



- Roads / Cutlines
- Communities
- Reference Area
- Phase II Project
- Natnl. Parks

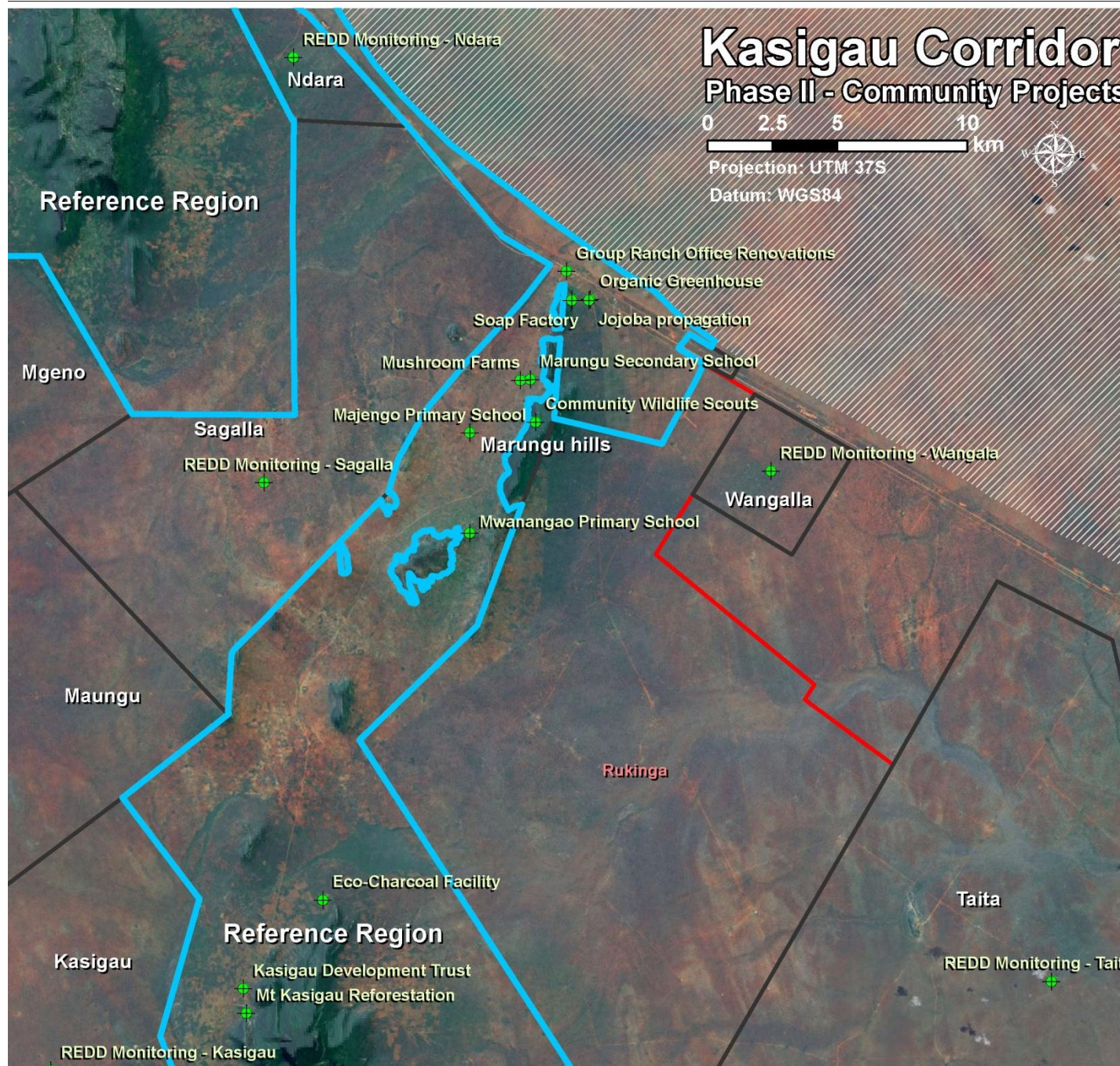


Project communities, internal roads and cutlines

Kasigau Corridor

Phase II - Community Projects

0 2.5 5 10 km
 Projection: UTM 37S
 Datum: WGS84



ID	PROJECT NAME
1	Organic Greenhouse
2	Marungu Secondary School
3	Group Ranch Office Renovations
4	Mwanangao Primary School
5	Kasigau Development Trust
6	Jojoba propagation
7	Eco-Charcoal Facility
8	Soap Factory
11	Mushroom Farms
12	Majengo Primary School
13	Community Wildlife Scouts
14	Mt Kasigau Reforestation
15	REDD Monitoring - Taita
16	REDD Monitoring - Amaka
17	REDD Monitoring - Kutima
18	REDD Monitoring - Dawida
19	REDD Monitoring - Choke
20	REDD Monitoring - Ndara
21	REDD Monitoring - Washumbu
22	REDD Monitoring - Kambanga
23	REDD Monitoring - Kasigau
24	REDD Monitoring - Maungu
25	REDD Monitoring - Wangala
26	REDD Monitoring - Sagalla
27	REDD Monitoring - Mgeno

Legend

-  Community Projects
-  Reference Area
-  Phase II Ranches
-  Rukinga Ranch
-  National Parks

Community Projects commenced during the first verification period

Annex 2

Plot Sampling Methodology

See Standard Operating Procedure.doc - Biomass and Standard Operating Procedure - Soils.doc for detailed procedures.

Annex 3

Biomass Allometric Equations by Species

See the supporting allometric model file "allometry_weighted_PhaseII.xlsx"

Annex 4
Aggregated Forest Inventory Results

See supporting file “Forest Inventory Phase II Summary-Strata2_v4.xlsx”