

SCAPES Leader with Associates Cooperative Agreement

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Ruvuma Landscape

Work Plan

10/01/2012 - 09/30/2013

for

World Wildlife Fund

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Acronyms

AFD	French Development Agency
AENA	National Association of Rural Extension (Associação Nacional de Extensão Rural)
CBCs	Community-based Conservation areas
CBNRM	Community-based Natural Resource Management
CBO	Community-based organization
CCBA	Climate, Community and Biodiversity Alliance
CEA GI	Coastal East Africa Global Initiative
COGECO	Chipanje Chetu Management Community Council
COMDEQ	Quirimbas Development Committee
CVCA	Climate Vulnerability and Capacity Analysis
DEO	District Environmental Office
DPA	Provincial Department of Agriculture
EACF	Eastern Africa Coastal Forests
EAME	Eastern African Marine Ecoregion
EAMFE	Eastern Arc Mountain Forests Ecoregion
ELAN	Ecosystems and Livelihoods Adaptation Network
ESARPO	Eastern and Southern Africa Regional Program Office
FFI	Flora and Fauna International
GTZ	German Technical Cooperation
HEC	Human Elephant Conflict
IGA	Income Generating Activity
INGC	National Institute of Disaster Management
IPCC AR4	Intergovernmental Panel on Climate Change Fourth Assessment Report
IUCN	International Union for Conservation of Nature
KfW	Kreditanstalt für Wiederaufbau (<i>Reconstruction Credit Institute</i> , the German government-owned development bank)
LCTWC	Likuyusekamaganga Community Wildlife Training Institute
LIFE	Living in a Finite Environment
MICOA	Ministry for the Coordination of Acção Ambiental (Mozambique)
MITUR	Ministry of Tourism
M&E	Monitoring and Evaluation
MOMS	Method Oriented Monitoring System
NDC	National Development Corporation
NEMC	Tanzania's National Environment Management Council
NI	Network Initiative
NGO	Non Governmental Organization
NP	National Park
NRM	Natural Resource Management
PFA	Participatory Forest Management program
PLUM	Nachingwea District Participatory Land Use Management
PRA	Participatory Rural Appraisal
QNP	Quirimbas National Park
QNP-NR	Quirimbas National Park to Niassa Reserve corridor
REDD	Reduced Emission from Deforestation and Degradation
RMAC	Risk Management and Adaptation Committee
SDAE	District Department of Agriculture, Mozambique

SPFFB	Governmental Department for Forests and Wildlife Management
TIC	Tanzania Investment Center
VA	Vulnerability Assessment
VCS	Voluntary Carbon Standard
VGS	Village Game Scout
VICOBA	Village Community Bank
VNRCC	Village Natural Resource Conservation Committee
WCS	Wildlife Conservation Society
WD	Wildlife Division
WMAs	Wildlife Management Areas
WWF	World Wildlife Fund

Coastal East Africa
Ruvuma Landscape

PROGRAM OVERVIEW*Programmatic Approach*

The Great Ruvuma Landscape of Northern Mozambique and Southern Tanzania is an extensive transfrontier area flanking the Ruvuma River. It embraces outstanding parts of four WWF Global 200 ecoregions: the Southern Inhambane-Zanzibar Coastal Forest, East African Mangroves, Eastern Africa Marine Ecoregion, and Eastern Miombo Woodlands and Savannahs. The Ruvuma Landscape spans part of southern Tanzania, and northern Niassa and Cabo Delgado provinces in Northern Mozambique. Two prominent wildlife corridors connect the Selous Game Reserve in Tanzania with Niassa GR in Mozambique, and another corridor connects Niassa Reserve and Quirimbas National Park (QNP). The Selous Reserve is the largest protected area in Africa, forming a major wilderness area with high plant, bird, reptile and mammal species diversity. Vegetation is dry miombo woodland bordering on East African coastal forests, an important ecoregion that also is adjacent to the East Africa Marine Ecoregion to the east. The botanically rich Coastal Forests and vast Miombo Woodlands provide the largest remaining unfragmented range for threatened wild dog, lion, leopard, eland, roan, black rhino and savannah elephants. Isolated inselbergs (rock hills or knobs) in the area contain rare and endemic plant species. Endemic fish species have recently been discovered in the Ruvuma River.

The full economic potential of this biological wealth has not yet been attained by the populations of Mozambique and Tanzania. In Mozambique, life expectancy is 38 years, and per capita income is \$150 per year, with many in rural areas living on less. In Tanzania, life expectancy is 51 years and 80 percent of the population derives their livelihoods through agriculture. Food insecurity is a characteristic of the landscape, exacerbated by human-elephant conflict.

The Ruvuma Landscape is undergoing an extraordinary transformation that could either lead to ecological and social degradation seen elsewhere in Africa, exacerbated by climate change, or a more secure future through protection, management, and sustainable use of the unique natural assets now at risk. The demands on this landscape are so great that trade-offs among the services and values have become the rule. The challenge is compounded as growing degradation reduces the landscape's ability to support livelihoods, economic development, and economic opportunities. This combination of ever-growing demands seriously diminishes the prospects for achieving core development and sustainability goals, including those of the Millennium Development Goals and Millennium Ecosystem Assessment.

Current and proposed investments in the region could present a major opportunity for livelihood improvement to the rural communities located in the region. However, identification and management of trade-offs among various uses of resources is key to ensuring sustainable development of the region. Unmanaged growth can lead to ecological devastation, increased exhaustion of the resource base, fragmentation of habitats and isolation of populations and increased economic imbalances. To avoid this and promote sustainable solutions, it is critical to promote a process that ensures transparency and good governance,

as well as equitable use and distribution among stakeholders of the benefits or resources derived from the landscape.

The key actors in the landscape are outlined below:

- Local community residents: villages in the Nairoto area of western Cabo Delgado Province (15,000 residents), residents of the Chipanje Chetu community-managed concession (6,000 residents), and the Community-based Conservation areas (CBCs) under development that will benefit community members on the Tanzanian side of the border (more than 10,000 residents).
- NGO partners in Tanzania: WWF has worked with GTZ in developing management interventions for wildlife corridors, as well as CBC interventions to establish Wildlife Management Areas.
- Tanzania Government Ministries/Agencies: Tanzania's National Environment Management Council (NEMC), Tanzania Investment Center (TIC), Wildlife Division (WD)¹, Local Governments, Ruvuma River and Southern Coast Basin Water Office², and the National Development Corporation (NDC), mandated to oversee implementation of Mtwara Development Corridor on the Tanzanian side.
- NGO partners in Mozambique: INGC (*Instituto Nacional de Gestao das Calamidades*), the Society for Management of the Niassa Reserve, FFI, WCS, Aga Khan Foundation, Kulima, UMOJI³ Association, AENA, and Estamos, a local NGO implementing sanitation, public education about HIV/AIDS, and other subjects in cooperation with WWF.
- The Quirimbas National Park Administration, Quirimbas Development Committee (COMDEQ), the Ibo and Quissanga District Administrations, the Marine Administration of Cabo Delgado Province, and the Fisheries Department of Cabo Delgado.
- Provincial Government of Niassa Province, especially the Directorates of Tourism, Agriculture, Environment, and Fisheries
- Mozambique's Ministry of Environmental Affairs (MICOA) and the Ministry of Tourism (MITUR).
- CARE and World Wildlife Fund Alliance: an institutional partnership between WWF-US and CARE-USA has been launched in the region, providing the foundation for scaling-up the partnership to a global level.

A core WWF strategy is to build effective partnerships with local communities. WWF employs a partnership approach to conservation, collaborating with a range of local agencies, institutions and partners.

Program Goal

The overall goal of this program is to make three wildlife corridors operational, thereby providing connectivity between areas with critical biodiversity value within the Ruvuma Landscape.

¹ Please note that WD is a division or institution under the Ministry of Natural Resources and Tourism in Tanzania which is responsible for managing Game reserves such as the Selous Game Reserve and Wildlife Management areas.

² The Ruvuma River and Southern Coast Basin Water Office is an institution under the Ministry of Water and Irrigation which is responsible for allocation of water resources, such as issues water use permits or licenses, controls water pollution and water sources protection.

³ Meaning "As One" in the local ChiNyanja language of Lake Niassa.

Targets, Threats Analysis and Program Response

Biodiversity targets for the SCAPES program in the Ruvuma Landscape have been identified in a 2011 strategic planning process as: elephants; wild dogs; miombo forests and dambos; freshwater sources; and montane forests and inselbergs. Human wellbeing targets are human health and economic well-being. More specifically, elephants are the flagship species for this program and landscape; wild dogs are representative of sensitive, wide-ranging species; miombo is the primary habitat type; freshwater sources include rivers, streams and wetlands; montane forests and inselbergs (kopjes) are the center of biodiversity and endemic species for the landscape; human health represents food security; and economic well-being relates to poverty avoidance.

WWF completed a situational analysis that identified the direct threats and drivers of biodiversity loss in the program area. The threats to the biodiversity targets are all assumed to be illegal and/or unsustainable include poaching (e.g., poaching for economic gain like elephant ivory, sale of meat, and hunting for supplementary protein intake); retaliatory killing like wild dogs for destruction of livestock, and; habitat conversion to agriculture and associated fires; infrastructure development (including human settlement expansion as well as roads, bridges, power transmission lines, large-scale agricultural programs, etc.); mining (separate from infrastructure because of the added threat of pollution in freshwater sources); logging (primarily large scale felling of valuable timber species for economic gain); and charcoal production. The contributing factors to these threats come from two main sources: poor governance and poor planning.

As part of the annual work planning process and adaptive management for this year, WWF staff coordinating the Ruvuma Landscape revisited the threats analysis, to evaluate against changes within the entire region. Though staff are concerned with a noticeable increase in elephant poaching and illegal logging, a more thorough review of the threats are needed in FY13. We will provide an update on our progress in the FY13 semi-annual report. We determined that the threats ranking are viable as previously submitted, until a more comprehensive review is done in FY13.

1. Poaching

Foreign demand for wildlife products (e.g., ivory and rhino horn) partly drives the illegal wildlife trade, assisted by easier access through new infrastructure development; food insecurity of impoverished local people results in bush meat hunting. Across the landscape, poaching and/or trafficking in ivory by well organized crime units continues to rise. In both Mozambique and Tanzania, there has been a surge in elephant poaching using agricultural chemicals as well as automatic rifles and helicopters, as foreign nationals have entered the country for the sole purpose of ivory poaching.

2. Retaliatory killing of wildlife

Retaliatory killings occur with increasing human-elephant conflict around protected areas where elephant populations are growing, and humans are encroaching on wildlife habitat and undertaking unplanned land use activities.

3. Habitat conversion to agriculture and uncontrolled fires

Traditional coastal agriculture, or short-term shifting cultivation, results in forested areas being converted to farms, and then abandoned and left fallow. The use of fire is often mismanaged and results in wildfires degrading large areas of forest and woodland, invading

lowland coastal forest, and converting to more fire-adapted vegetation types, losing the endemic coastal forest specialist species and increasing instances of human-wildlife conflict.

The expansion of large scale agriculture associated with infrastructure development is driving habitat loss and fragmentation. At particular risk are the East African coastal forests, a set of tiny forests found on the coastal belt, often embedded within a larger habitat mosaic of farmland, savannah-woodland and thickets. The small size and fragmented nature of these forests means they will come under increasing stress. If habitat is further fragmented by human development, there will be no gradients along which species can migrate and survive, and connectivity, which is vital for wide-ranging species and local endemics, may be lost. Furthermore, these agricultural changes may be short lived. Impacts from climate change may lead to these areas becoming unsuitable for some sorts of agriculture and thus these biodiversity losses are for only short-term gain.

4. Infrastructure development and mining:

The Governments of Mozambique, Tanzania, Malawi and Zambia have committed to development of the region through the Mtwara Development Corridor Agreement. Programs are underway to pave north-south and east-west roads in Tanzania and Mozambique. The Mtwara Corridor development initiative also increases east to west development across the landscape, including a possible railway line, port development, road tarring, and bridge building. Petroleum exploration has begun on both sides of the border, with natural gas extraction underway north of the border and exploratory drilling to the south. Infrastructure programs can be a major threat to natural habitats when site selection and mitigation planning omits biodiversity and ecological considerations, for example, road and bridge building result in unregulated open access to resources; oil and gas extraction development destroys habitat, opens up new areas to settlement, and brings a risk of pollution.

5. Logging and charcoal production

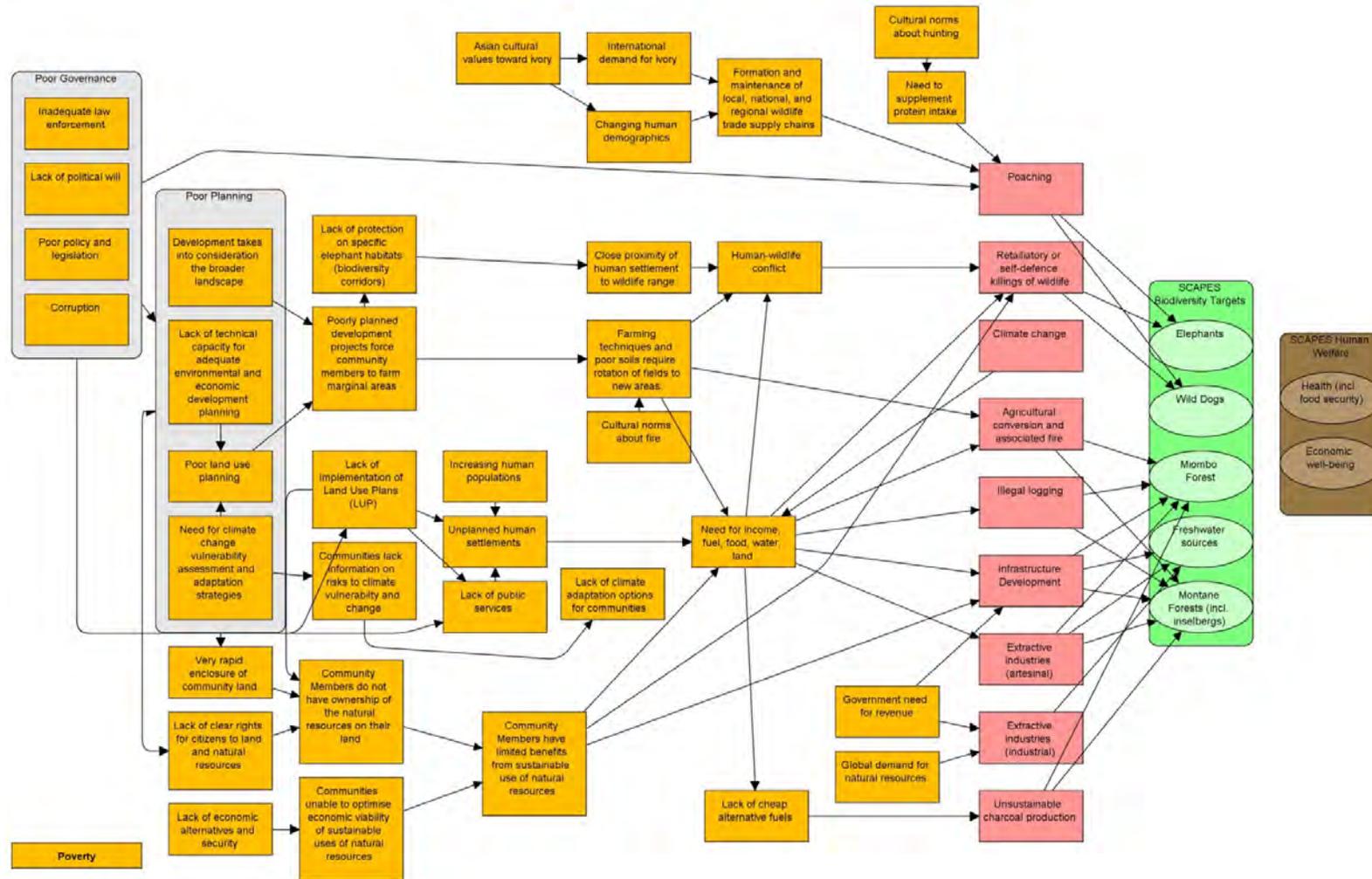
Unsustainable logging results in species depletion and localized extinction of valuable commercial species through high pressures from logging in the coastal forests of northern Mozambique and southern Tanzania as a result of improved accessibility and poorly implemented forest management plans. Illegal activities and limited value-adding industry leads to unrealized development potential as a result of reduced state revenues and disenfranchised forest-dwelling communities. High demand, unplanned tree felling for charcoal production is occurring, using inefficient kilns and unsustainable extraction, heavily impacting forested areas near major cities in both Tanzania and Mozambique (e.g., Pemba). This trade is informal with little or no regulation, and few financial incentives to ensure sustainability.

6. Climate Change:

Climate change and climate variability are emerging as threat multipliers for biodiversity and livelihoods in the Ruvuma Landscape. This is already felt in the Ruvuma by communities whose livelihoods are tied to its natural resources. Current climate literature predicts that Eastern and Southern Africa is likely to face increased temperatures, increased dry spell duration, later onset of the rainy season (in particular the rains between October and December), and increased intensity of rains in the beginning of rainy season. These changes are likely to cause decreased food security and increasing problems with water management from both flooding and drought which may force vulnerable rural people to resort to emergency food sources, often increasing the incidence of hunting, fishing and wild food gathering. Climate change will lead to shifts in the ranges of both plants and animals. This

will turn up not only as impacts on subsistence livelihoods but also in shifts of ecosystem services (e.g., pollination, seed dispersal) that will have indirect effects on livelihoods. Indirectly, climate change will cause changes in growing seasons, crop-type suitability, diseases and disease vectors. Not only will these changes impact livelihoods but they will also likely lead to greater pressure on ecosystems to either provide more sustenance or land for planting different crops.

Figure 1. Conceptual Model for Ruvuma Landscape



CARE-WWF Alliance Situational Analysis and Drivers of Change⁴

Preceding the Ruvuma Landscape Conceptual Model, in 2009 CARE and WWF launched a major initiative targeting the Mtwara and Nacala development corridors in southern Tanzania and northern Mozambique to promote a pro-poor and sustainable approach to economic development and management of natural resources. As part of this initiative, consultants conducted in-depth situational analyses for Tanzania and Mozambique in July 2009. The first stage of this analysis was a resource based inventory of the biophysical, socio-economic, and governance landscapes of these regions. The second stage of analysis described the themes and geographical influences that are driving change in the region. These drivers are defined and assessed in the context of livelihoods and environment, and the interactions between people and landscapes in the corridors. Drivers of change identified are grouped into: Environmental drivers; Governance drivers; and Socio-economic drivers.

The drivers of change parallel many of the threats outlined in the Ruvuma conceptual model. The major drivers of change identified for Tanzania and Mozambique include:

Drivers of Change	Environmental Drivers	Governance Drivers	Socio-Economic Drivers	Infrastructure and Technological Drivers
Tanzania	<ul style="list-style-type: none"> • Climate change (increased variability and uncertainty) • Energy and resource availability • Human-wildlife interactions 	<ul style="list-style-type: none"> • National political and policy enactment • International political cooperation dynamics • Global conservation interests • Law enforcement 	<ul style="list-style-type: none"> • Development as an “aspiration” • Land access and use • Cultural connectivity • Migration • Local-national-global trade networks 	<ul style="list-style-type: none"> • Infrastructure development • Technological uptake
Mozambique	<ul style="list-style-type: none"> • Availability of surface water resources • Modification of critical regulating systems (soil fertility loss and erosion, deforestation, overexploitation of animal resources) • Human-wildlife interaction and conflict • Climate Change and natural hazards 	<ul style="list-style-type: none"> • Political and policy implementation – centralism vs. devolution • Global conservancy interests • Global trade issues • Local values and dilution of influence and power of customary institutions 	<ul style="list-style-type: none"> • Health (e.g., low life expectancy) • Education and capacity • Access to land and Changes in land use 	<ul style="list-style-type: none"> • Trade (hardwood, marine products, ivory) • Use of destructive technologies and technology uptake • Infrastructure development (roads, fuel stations, cell phones)

⁴ Driver of change is defined by WWF and CARE to mean any factor that changes the balance and nature of interactions between livelihoods and landscapes. It is a significant variable that can have both a positive or negative impact, depending on the context and perspective.

From the drivers, the consultants built an overview of situations in the corridors where the pressure points between people and landscapes are at their greatest, and made recommendations for priority areas for action. These analyses and recommendations formed the basis of a CARE-WWF Alliance meeting in Dar es Salaam in August 2009, where it was decided that the Alliance would focus on climate, agriculture and poverty at a continental scale (Rural Futures) and the coastal zone of northern Mozambique, including the Primeiras and Segundas Livelihood Program, now in its fifth year of joint CARE-WWF implementation. Work of the CARE-WWF Alliance and the SCAPES program presents opportunities for shared lessons and learning between the organizations and across the boundaries of the two countries.

Site Strategy

The Ruvuma Landscape is an extensive transfrontier area that flanks the Ruvuma River, embraces four critical ecoregions with endemic plant species, protected areas, and wide-ranging wildlife species. It is home to many local communities. WWF and partners already work in the protected areas of the landscape, but they are not complete ecological units. The strategic approach of this program is to work through the development of three critical corridor areas in the landscape embracing multiple land uses and linking with protected areas (see Map 1). Corridors are an important first step in developing sustainable land-use planning for conservation of wide-ranging species, buffering climate change effects, reducing habitat fragmentation, and promoting compatible economic activities to promote development alongside sustainable resource use and management. Properly designed biodiversity corridors can also maintain home range areas for species like elephants and wild dogs and other predators, thus reducing the risk of biodiversity loss, while providing space to reduce human-wildlife conflicts. This program will look at ways to build resilience in these corridors by adapting management strategies to deal with climate variability, and use climate and biodiversity models to determine optimal boundaries of the corridors that make them relevant through 2050 under various emission scenarios.

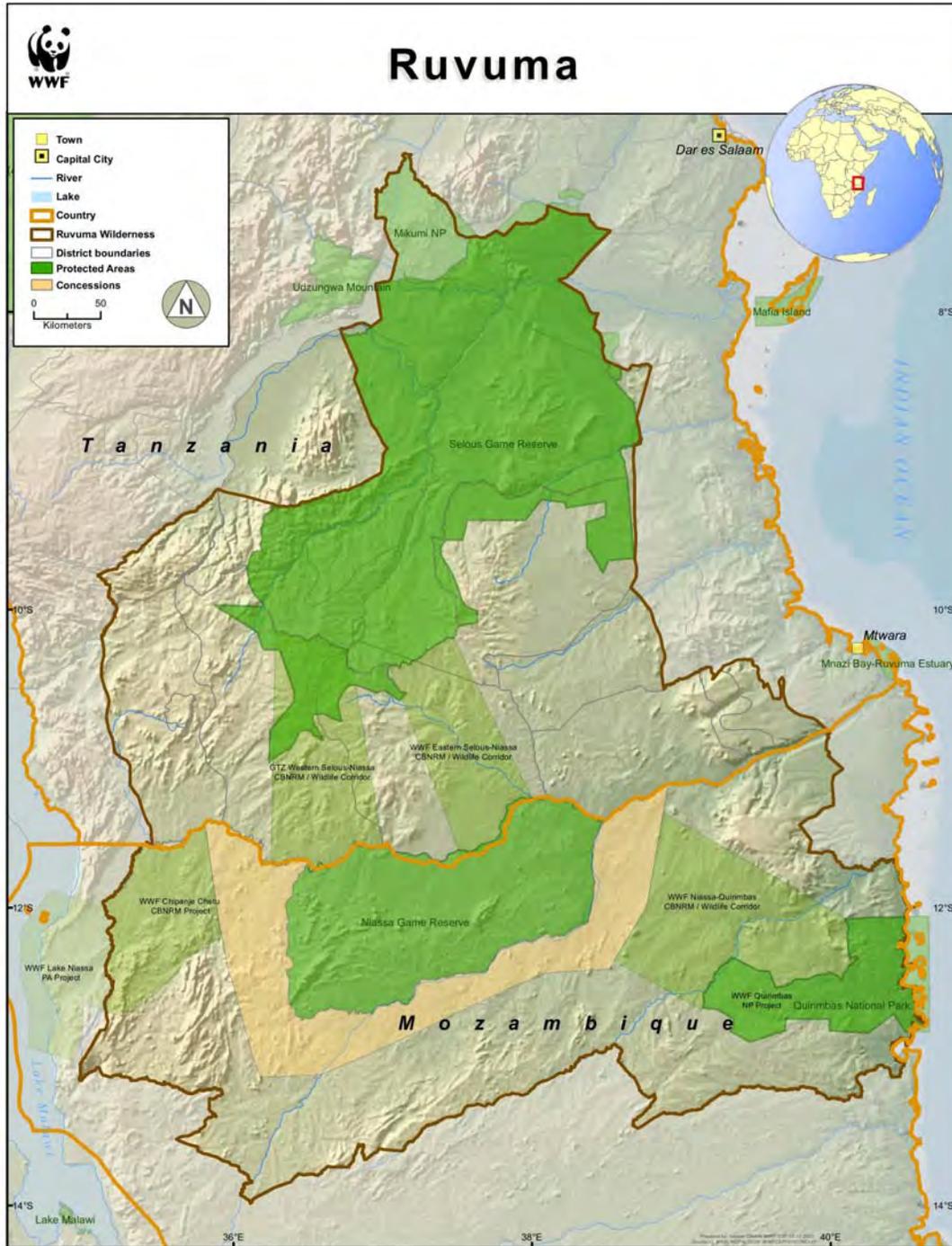
This work in Ruvuma furthers WWF's Coastal East Africa Global Initiative (CEA GI) Conservation Strategic Plan, 2010-2015, completed in June 2009, builds on the CARE-WWF Situational Analysis described above, and builds on the East African Marine Ecoregion (EAME) program implemented with USAID Global Conservation Program (GCP) funding that followed a similar approach.

Taking a threats-based approach and working closely with local communities to improve livelihoods and conserve biodiversity, this SCAPES program contributes to achieving the overall Ruvuma Landscape goal through the following objectives:

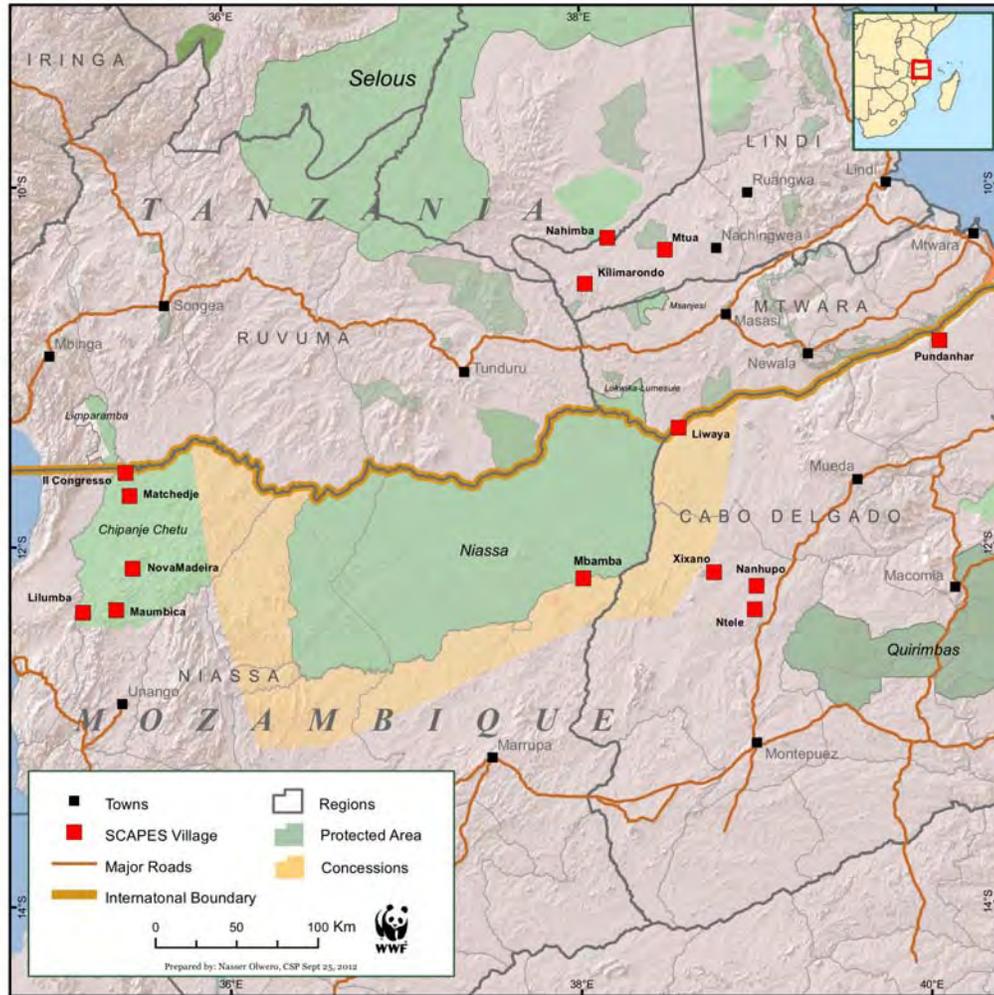
1. Help stakeholders gain a clear understanding of opportunities, risks and vulnerabilities due to climate change along corridor areas.
2. Assist stakeholders along corridors in implementing the management techniques necessary to establish and maintain biodiversity corridors over time, while helping to improve food security.
3. Promote sustainable finance mechanisms for the maintenance of ecological processes in the Ruvuma landscape.
4. Promote learning and sharing for biodiversity conservation and climate change adaptation practice.

The activities for this program are focused in the following three critical corridors (see Maps 1 and 2):

- 1. Quirimbas National Park – Niassa Reserve Corridor in Cabo Delgado Province.** This corridor includes the Quirimbas National Park (QNP) and several agricultural-based villages in the Nairoto area of western Cabo Delgado Province (15,000 residents). WWF has found patchy distribution of different populations or meta-populations of elephants across the Ruvuma landscape, with water-driven movements across the Ruvuma River between Niassa Reserve and into Tanzania. In the Quirimbas-Niassa corridor area, radio-collared groups have moved in an average radius of 8 km between 2007 and 2009, indicating genetic, small group movements, rather than large seasonal migrations. While early results of radio collaring show that elephants do not migrate along this corridor, the populations resident in the corridor maintain a genetic link between the QNP, the coast, and the Niassa Reserve. Establishing appropriate zoning for human use (crop fields and residential areas) and wildlife along biodiversity corridors are an important element of the climate change strategy in northern Mozambique as they allow movements between increasingly separated populations.
- 2. Niassa Reserve – Lake Niassa Corridor in Niassa Province,** consisting of the Chipanje Chetu community managed hunting concession area where 6,000 residents live in the Chipanje Chetu community-managed concession forms a bridge between the Niassa Reserve and the newly established Lake Niassa Reserve. The area has increasing numbers of wildlife as it has served as a pilot community managed conservation area for the past 10 years, without legal status as such, and without a high level of benefits accruing to local communities. Both communities and the provincial Government have requested WWF involvement to assist communities to better manage the area, negotiate with safari operators, and develop a livelihoods system that will be secure over a range of future scenarios. This corridor, taken together with the Quirimbas-Niassa Corridor, will mean that a chain of protection and buffering (both human and biodiversity) will be established across the entire width of northern Mozambique, from lake to sea.
- 3. Niassa Reserve – Selous Eastern Corridor in Tanzania.** WWF Tanzania, through the Selous project, has radio collared elephants to confirm the Selous-Niassa eastern corridor, in addition to using local knowledge to describe where elephants move seasonally between the Selous and Niassa Game reserves. WWF –Tanzania has been involved in biodiversity conservation work in the Eastern zone of the Selous Game Reserve since 1997. In 2007 WWF also started supporting the establishment of Wildlife Management Areas (WMAs) along the Selous-Niassa Corridor, one being the Mchimalu WMA close to Lukwika–Lumesule Game Reserve, and another is Ndonda WMA, close to Msangesi Game Reserve. WWF through the Natural Resource Management Policy Program has been supporting the Magingo WMA since 1995. The Liwale (Magingo) WMA has been gazetted and initial establishment processes were started and funded by GTZ. The Selous-Niassa wildlife corridor is very important as it is an important area and route where elephants use and pass through when migrating from Tanzania to Mozambique during different periods of the year depending on the availability of food and water.



Map 1. Ruvuma Landscape with Corridor Project Areas: WWF Eastern Selous-Niassa CBNRM/Wildlife Corridor, WWF Chipanje Chetu Corridor, and WWF Niassa-Quirimbas Corridor.



Map 2. SCAPES project villages within Ruvuma Landscape.

OBJECTIVES AND ACTIVITIES

Total Program Level of Effort: \$735,732 (USAID: \$361,474; WWF Match: \$374,258)

Objectives

Objective 1: Help stakeholders gain a clear understanding of opportunities, risks and vulnerabilities due to climate variability and change along corridor areas.

Climate variability and change presents obstacles to maintaining biodiversity, ending poverty and ensuring the livelihood security of poor and vulnerable communities. These vulnerable communities need to improve their capacity to plan and implement climate variability and change adaptation and disaster risk reduction strategies, in a way that builds community and ecosystem resilience without risking maladaptation ideally using ‘no-regrets’ strategies.

Support to communities to help them address climate variability and climate change will mean decreasing the need for local communities to resort to emergency survival strategies that lead to increased pressure on natural resources. Improved zoning of croplands and villages reflecting present human elephant conflict (HEC) realities and future shifts in climate and climate associated shifts in crops and biodiversity will mean clearer definitions of wildlife priority areas and less friction over the medium term; lowered incidence of human elephant conflict will reduce revenge killing of this species. Better food security will mean less recourse to survival strategies such as hunting, and charcoal making. It is very important to avoid new threats to biodiversity at a time when natural systems and species themselves have to adapt to climate change. Finally, understanding the range of likely changes in biodiversity richness, species ranges, and agricultural suitability/food security and water resources will provide resource and community managers with the information they need to design a long-term sustainable strategy for the area.

CARE’s approach to climate adaptation is grounded in community empowerment and increasing communities’ capacity to adapt to and mitigate risks from climate change. CARE has carried out climate adaptation projects in countries such as Bangladesh, Tajikistan, Bolivia and Guatemala. The communities analyze their vulnerability to climate change and then decide on what adaptation measures are needed, using the Climate Vulnerability and Capacity Assessment (CVCA) methodology. Adaptation plans then include adaptation options such as the use of drought or water tolerant varieties, crops with shorter growing seasons, early warning systems and escape routes when cyclones approach. By combining local knowledge and scientific data, the process builds stakeholders’ understanding about climate risks and adaptation strategies. It provides a framework for dialogue within communities as well as between communities and other stakeholders. The results provide a solid foundation of practical strategies to facilitate community-based adaptation to climate change. Gender is cross cutting in all activities. The CVCA methodology disaggregates information from women’s and men’s groups for analysis. Women typically have different concerns than the men. Women normally mention an increase in disease (increase of malaria, for example) as a result of increased temperatures while men mention concerns with reduction in crop production and productivity.

A local NGO partner/consultant was identified in FY10 and FY11 to carry out the community vulnerability analyses. In FY13-14 CARE will contract the local NGO AENA to support current and future Farmer Field Schools (FFS) and work increasingly with private partners

(such as Lipilichi Wilderness Safaris) to support work in Niassa. CARE will focus its attention on the Quirimbas Corridor, which is closer to its main office.

Drawing on models developed for the Coastal East Africa Region in partnership with an African academic institution (University of Cape Town) will provide a general overview of how longer term climate change will likely impact the area at multiple scales. WWF led a landscape-level climate change vulnerability assessment (VA) at the end of FY12 for the Ruvuma Landscape including assessment of the vulnerabilities and viability of the wildlife corridors through the 2050s. The VA was an integrated landscape vulnerability assessment which utilized both desktop studies as well as participatory approaches in order to assess climate and development related impacts on key ecosystems, the services they provide, the communities and species that rely on them.

The landscape-level vulnerability assessment provides a better understanding of the potential climate and development related changes effects over the next 20 to 40 years. The landscape VA together with local level vulnerability assessments in selected villages (CVCAs) will help WWF and CARE to further develop participatory community adaptation strategies and pilot adaptation activities in affected communities. Results will feed information into the SCAPES program for implementation of climate adaptation plans and initiatives in FY13-14. These adaptation plans based on local and landscape level vulnerability assessments will work to build resilience to climate change and promote adaptation in communities, increasing food security and hence reducing poaching, conversion of forest for agriculture, and uncontrolled forest fires. The vulnerability assessment will help inform the Ruvuma conservation strategy so it can be made climate smart to build ecosystem resilience, reduce threats to biodiversity and facilitate adaptation of biodiversity elements (see Figure 2).

Level of Effort for Objective 1: Total \$77,340 (USAID: \$75,261; WWF Match: \$2,079)

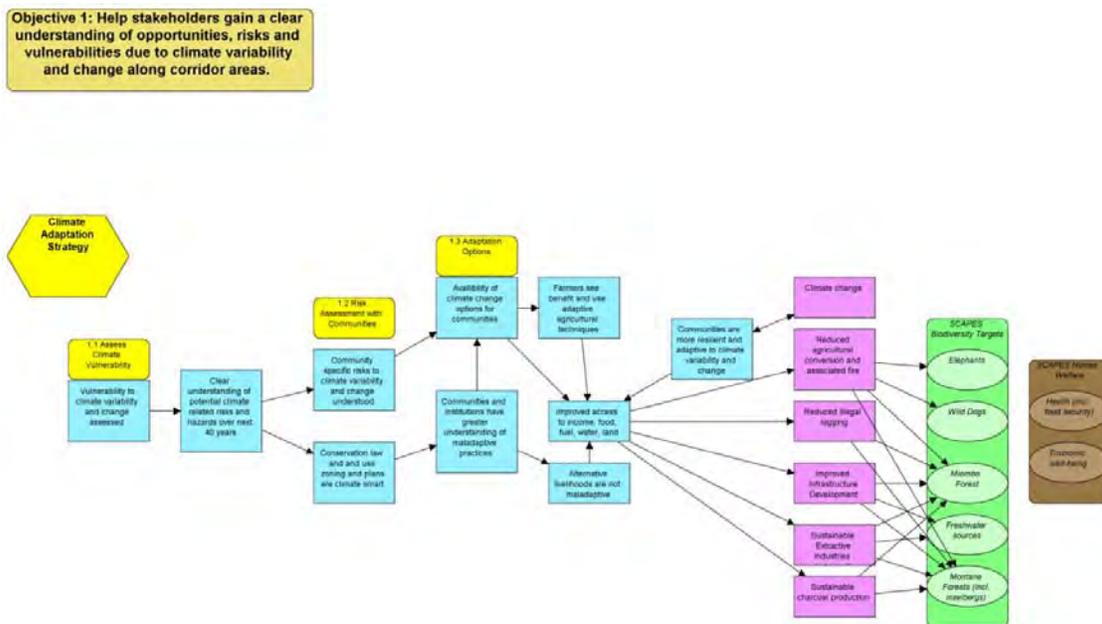


Figure 2. Results chain showing how the Objective 1 activities contribute to reducing the threats and achieving the biodiversity and livelihood targets of the landscape.

Objective 1.1: Conduct a vulnerability assessment for the Ruvuma Landscape and assess the vulnerabilities and viability of the wildlife corridors.

WWF conducted a landscape-level vulnerability assessment for the Ruvuma Landscape at the end of FY12 in Songea, Tanzania. This assessment brought together climate and vulnerability data from several sources, including inputs from the CVCAs, and will help identify the key areas that require future adaptation actions, including reforestation, watercourse protection, and land use zoning. The complete results of this workshop will be disseminated to all stakeholders in FY13, but some initial ideas for adaptation from the workshop included improved agriculture, fire breaks and fire management to control more widespread fires, and water holds or reservoirs for cattle and wildlife. Disease transmission between wildlife and livestock was discussed and it was agreed that there is a large need for improved water management and water quality monitoring as a result of destruction by artisanal mining and increasing dry spells.

To complement the landscape-level analyses supported by SCAPES, WWF's CEA GI contracted the University of Cape Town to document existing data on climate trends and projections for Kenya, Tanzania and Mozambique. A draft has been completed, titled "Current state of knowledge on climate trends and variability, and downscaled climate change projections, for Eastern Africa". Major findings of this study that pertain to the Ruvuma Landscape include:

- An observed decrease in the frequency of rain days during winter and spring with an increase in intensity of rainfall and longer dry spells near Lichinga and Mtwara.
- An observed decrease in maximum and minimum temperatures during October and November near Lichinga.
- Projected⁵ delays in the start of the rainy season, decreasing frequency of rain days during transitional seasons, and longer dry spells between rain events in the winter and spring.
- Projected increase in the maximum daily temperatures by 2-2.5°C, particularly during October and November.
- A predicted increase in excessive and intense rainfall periods causing increase in floods.

Potential climate impacts are thus different across the landscape, trends varying from hotter, drier weather in southern Tanzania, with increased rainfall in Mozambique, to a decrease in length of the rainy season from six to three or four months. Thus, significant shifts in hydrological cycles are likely, with concomitant impacts to ecosystem function and agricultural production zones. Taking a proactive approach to managing natural resources over the long term, WWF will synthesize the results of the Ruvuma Landscape climate vulnerability workshop, and disseminate this information to all stakeholders in the region in FY13. It will be important to mainstream these results of the assessment into planning and development led by the various government agencies that operate in the Ruvuma, in addition to WWF's Ruvuma Landscape Work Plan.

⁵ Projections were done using a statistical downscaling methodology called Self Organising Map Downscaling (SOMD) and were run for both a high and low emissions scenarios (IPCC A2 and B1).

*Activities**In FY13 WWF will:*CBNRM/Land Use planning Strategies

Activity 1.1.1: Undertake a climate change vulnerability assessment for the Ruvuma landscape. Completed and reported in the FY12 Annual Report.

Activity 1.1.2: Disseminate technical information from the Ruvuma landscape climate change vulnerability assessment to all stakeholders.

Building on the FY12 VA, results and recommendations on mainstreaming adaptation will be documented in a Ruvuma landscape VA report. This report will be disseminated in appropriate ways to target audiences including national and local government, the pilot communities, NGOs, donors and the private sector.

The program will facilitate dissemination of the VA results in the communities and villages to ensure that the information also reaches the field and is disseminated in an appropriate manner. This can be joined with the dissemination of the CVCA results if timing (with Ruvuma landscape VA results) permits.

Expected Outputs/Results:

Communities, government agencies, nongovernmental organizations and donors are aware of the expected impacts of climate change on key resources.

- At least two stakeholder workshops held; one in Mozambique and one in Tanzania. These workshops will cover the (1) result of the Ruvuma Landscape Vulnerability Analysis and impact of climate change on stakeholders and (2) possible ideas for mitigation.
- Production of two reports: (1) a shorter summary for policy makers and (2) a longer technical report.

Activity 1.1.3: Collect rainfall and temperature data for the last 30 years at Sanga, Mueda, Montepuez, Palma, Mecula, Mavago and Nangade districts weather stations in Mozambique. This activity was completed and reported in FY11.

Level of Effort for Objective 1.1: Total \$4,620 (USAID: \$4,620; WWF Match: \$0)

Objective 1.2: Analyze and disseminate results from climate change risk and vulnerability assessments in affected communities, and continue to implement community adaptation and mitigation strategies.

The climate change risk and vulnerability assessments were completed using CARE's CVCA tool. The CVCA uses the Participatory Rural Appraisal (PRA) methodology and includes well-tested tools (such as semi-structured interviews, resource mapping, gender/vulnerable group analysis, cash flow diagrams, community timeline, risk mapping, livelihoods strategy ranking, and vulnerability ranking) disaggregating results by gender to analyze vulnerability and propose adaptations to climate change. CARE's CVCA tool and PRA activities was the first step necessary for WWF to implement management techniques to conserve biodiversity

in these corridor areas, outlined in Objective 2. Further analysis and consultation of the CVCA work in the Ruvuma will reveal additional adaptation activities that would be beneficial given a changing climate, and will also be used to verify the adaptation activities currently underway and those proposed as part of the Farmer Field Schools.

The output of these community based analyses is a set of strategies, designed by communities themselves with the help of other stakeholders, which permit communities to adapt to climate change and climate related disasters and improve the use of natural resources in the community. Examples of community resilience and adaptation activities include the diversification of cropping patterns, development of early warning systems or development of seed banks to assist people who lose seeds due to flood or drought. Selected activities will depend on the specific circumstances facing a community.

WWF is collaborating with CARE at a global level to integrate ecosystems aspects into CARE's adaptation tools, to optimize the role that ecosystems can play in helping poor and vulnerable people to adapt to climate change. At the same time the aim is to ensure that community adaptation strategies do not place additional pressure on ecosystems, and hence reduce resilience of ecosystems to adapt to climate change.

Activities

In FY13 CARE will:

CBNRM Strategy

Activity 1.2.1: Provide refresher training on the CRiSTAL and CVCA tools for government, partners and WWF staff involved in the CVCA analysis. This activity was completed in FY11 and reported in the FY11 Annual Report.

Activity 1.2.2: Joint visit to Quirimbas-Niassa corridor project area to select the three farming communities for CVCA analysis. This activity was completed in FY10 and reported in the FY10 Annual Report.

Activity 1.2.3: Analyze and disseminate CVCA results from previous years to communities and other relevant stakeholders. CARE and WWF have completed climate vulnerability assessments in 11 villages in the Ruvuma Landscape (8 in Mozambique and 3 in Tanzania). There have been delays in finalizing the reports for six of the village assessments, and reports with results of the CVCA's implemented during the past three years will be finished and translated (fully or partially depending on need) and disseminated in the eight relevant villages in Mozambique in FY13. This dissemination will include a presentation and discussion of some of the relevant results of the Ruvuma Landscape Vulnerability assessment done in September 2012 (Activity 1.1.2).

This dissemination will be carried out by CARE and their partners and will involve all relevant community members that were involved in the assessment so that their level of awareness is increased. For community-level stakeholders, for example, members from the technical team will visit the key villages where we conducted community-level assessments, and present the findings by June 2013. The assumption is that given that the process is participatory and that we are actively working with these

communities to develop adaptation options through activities such as Farmer Field Schools and “climate smart” conservation agriculture, the information from the landscape level VA will act as a catalyst for community led adaptation and better use of resources.

Expected outputs/results:

Communities are better prepared to address potential impacts from climate change, and have identified ‘climate smart’ livelihood options.

- Completion of CVCA reports for six remaining villages: Mtua, Nachingwea, Kilimarondo in Tanzania and Liwaya, Nanhupo, and II Congresso in Mozambique
- Community members in eight villages in Mozambique informed about the CVCA analysis results and vulnerabilities regarding climate changes as well as strategies for adaptation

Activity 1.2.4: Integrate climate change vulnerability and adaptation awareness into the existing community natural resource management committees, and in newly established Farmer Field Schools. The major focus for the year involves establishment and technical support to Farmer Field Schools (FFS) representing biomes where CVCA have been previously conducted. These include Xixano, N’tele, Nanhupo, Pundanhar, Negomano and Liwaya villages (in the Quirimbas-Niassa Corridor), and Chipanje Chetu (5 villages in the Niassa-Lake Niassa Corridor). For FY13, CARE will also be expanding its reach to Mbamba village, located on the edge of Niassa Reserve in northeastern Niassa Province. This expansion is the result of a growing relationship between CARE and a private partner, the Niassa Carnivore Project. Through this relationship CARE can expand agricultural activities to an important village area within the Quirimbas Corridor, capitalizing on the capacity of Niassa Carnivore Project. Going forward, CARE has also partnered more formally with Lipilichi Wilderness Safaris, who will be supporting the establishment and development of FFS in the five Chipanje Chetu communities. Work by both private partners will be overseen and monitored by CARE.

The FFS is one instrument that has been used throughout Cabo Delgado province in northeastern Mozambique to help farmers discuss, analyze, understand, learn and implement in individual farms. The Farmer Field Schools will be the major focal points for provision of technical support in conservation agriculture as an adaptation strategy, enabling communities to undertake practical on-farm experimentation with climate smart agriculture. In these communities, these Farmer Field Schools will carry out the functions of Risk Management and Adaptation Committees, but without the need of creating additional structures within the villages.

FFS and ToT (training of trainers) were completed in FY12 for farmers and government extensionists from the selected sites. Seeds and FFS material were purchased in FY12. Seeds and other inputs will be delivered in time for the start of the growing season. FFS sessions will take place every 1 or 2 weeks according to a set program. There is a quality control matrix used to supervise FFS by CARE.

These Field Schools will also provide a mechanism, in collaboration with traditional leadership, for representing the communities in NRM matters, and for enabling engagement with wider stakeholders. Traditional leaders are responsible in signing all

agreements at village level for any private investment, including those that involve use of natural resources.

Expected Output/Results:

Farmer Field Schools provide technical support to communities in implementing conservation agriculture as a climate adaptation strategy, thereby helping communities become more resilient and adapt to climate vulnerability and in turn reducing pressure on biodiversity and ecosystems.

- Continued support given to existing FFS's in Nanhupo and Liwaya, through AENA and technical oversight by CARE.
- Farmer field schools that facilitate adaptation to climate change and reduce environmental impact through CA established in 12 villages:
 - Quirimbas-Niassa Corridor - Xixano, Pundanmar, N'tele, Liwaya, Nanhupo, and Negomano villages
 - Niassa-Lake Niassa Corridor - Chipanje Chetu (5 villages) and Mbamba Village

In FY13 WWF will:

CBNRM Strategy

Activity 1.2.5: Undertake community vulnerability assessments and adaptation planning in Tanzania in partnership with CARE. Completed and reported on in FY12.

In FY13 WWF/CARE will:

Activity 1.2.6: Provide technical support to WWF Tanzania in carrying out a climate change risk and vulnerability assessment in affected communities in the Selous-Niassa corridor. Mario Basilio, CARE's SCAPES Officer, joined the WWF-TCO team in the field for a day in October 2011 to provide training to the WWF Tanzanian staff in CVCA methodology and to support the CVCA initiatives within the Selous-Niassa Corridor (1.2.5). However, this was far less time than originally anticipated. CARE and WWF have agreed that the WWF-TCO SCAPES Project Executant will make a trip to the communities in Mozambique with CARE staff in FY13 to become more familiar with the CVCA and to learn how to feed back the results of the CVCA's and facilitate community planning of future climate mitigation measures.

Expected Output/Results:

- WWF-TCO staff attends feedback meetings of at least two CVCAs in Mozambique led by CARE staff to review CVCA methodology and feedback methods.
- WWF-TCO staff disseminate CVCA and VA results in 3 SCAPES villages in Selous-Niassa Corridor of Tanzania: Nahimba, Mtua and Kilimarondo

Level of Effort for Objective 1.2: Total \$28,217 (USAID \$26,138; WWF match \$2,079)

Objective 1.3: Implement small scale adaptation/resilience building activities

Conservation or ‘climate smart’ agriculture seeks to improve soil fertility and moisture retention through three main tenets: cover crop or mulching, crop diversification, and minimum tillage. Agroforestry is incorporated to improve productivity through nitrogen fixing trees, such as the indigenous *Faidherbia albida*, which will be introduced in collaboration with the Ministry of Agriculture. The Community Adaptation Strategies will contain a series of activities aimed at building community resilience and/or adapting to the risks of climate change. Under this objective, each community will carry out a small scale adaptation or resilience building activity. These pilot adaptation activities aim to reduce forest conversion to agriculture and illegal hunting and increase resilience of communities to climatic changes leading to positive biodiversity impacts and protection of key species and the provisioning of ecosystem services for greater food security economic well-being (see Results Chain for Objective 1, Figure 2 and Annex 2).

Access to sources for improved varieties of planting materials (especially seeds) will be maintained and sustainable over time due to the fact that all germplasm supplied to the project (improved sorghum, cowpea, groundnut, pigeon pea varieties) can be replicated and multiplied without losing their genetic profile. The benefits of the new varieties (yield, shorter cycle, disease resistance) will encourage adoption and exchange within the target area. This is in line with the SCAPES FFS protocol CARE designed in August 2011.

Activities

In FY13 CARE will:

Activity 1.3.1: Introduce drought tolerant crops along with conservation agriculture techniques in target villages as assistance to Government Agriculture extension Program. A range of improved seeds (including sorghum, pigeon pea, cowpea, and groundnuts) that exhibit characteristics relevant to anticipated changes in climate in the Ruvuma area will be used through FFS. Key characteristics of these seeds include improved yield, drought tolerance, and shorter cycle. These varieties also facilitate crop diversification. Some permanent crops, like fruit and fruit trees (e.g., pineapple, mangos, avocado, cashews, etc.) might be introduced in FY13, depending on the purchase costs.

Four extensionists and 12 contact farmers (one from each selected community) will support the seeds distribution and use in SCAPES Farmer Field Schools in both Quirimbas and Niassa Corridor areas. The communities of Nanhupo, Nairobi, Liwaya, Negomano, Pundanhar, N’tele, and Mbamba (in Quirimbas Corridor) and the five villages of Chipanje Chetu (in Niassa Corridor) received training in a five day FFS practical session in September 2012. During FY13, Farmer Field Schools will run on a monthly basis during the growing season from November 2012 to March 2013 in each of these villages. Regular in-service training will be provided to the extensionists who in turn directly support the FFS. Nairobi, Pundanhar, Chipanje Chetu and Mbamba will be reached by the Ministry of Agriculture extensionists based in the respective Administrative Posts. Additional support will be provided in Chipanje Chetu by Lipilichi Wilderness and in Mbamba village by Niassa Carnivore Project. Starting this year, a field officer from AENA will also be supporting FFS from Nairobi.

Expected Output/Results:

- Greater farmer access to improved seeds.
- Increased number of farmers using improved farming methods, through demonstration at Farmer Field Schools.
- Successful demonstration of increased yields and benefits of improved and diversified seeds and farming methods through FFSs in each target village.

In FY13 WWF/CARE will:

Activity 1.3.2: Monitoring implementation of adaptation activities developed in FY10 and FY12. Vegetables and goats introduced in FY10 and FY11 will continue being monitored by both WWF and CARE in partnership with the government's Ministry of Agriculture at district level. WWF is measuring the size of the vegetable gardens, the number of farmers and the adoption of suitable agricultural techniques applied by the farmers (e.g., change from using fire to clearing the farm to mulching). We will also complete the remaining distribution of goats begun in 2010 in Nairoto Administrative Post in Montepuez District, Cabo Delgado Province. This involves Xixano (30 goats) and N'tele (60 goats), which will achieve the target baseline of 90 goats per village. This system uses the "pass on the gift" approach, through which families that have received goats are expected to care properly for their animals, and are then obliged to pass on offspring to other families. A survey is planned of the redistribution of goat progeny and monitoring the ongoing process once a permanent technician from AENA is established in the beginning of October 2012.

Given the potential negative impact of goats on the environment, WWF and CARE will work with communities to improve goat management techniques such as how to create strong corrals.

We will also monitor how actively vegetable production is continued, and estimate production quantities. The government agricultural extension officer in each community will lead on this monitoring effort through: a) field visits; b) Agro Eco System Analysis (AESAs) done at every FFS session and recorded by each FFS group for longitudinal comparison.

Expected Output/Results:

For adaptation to a variable climate, communities need to have alternative and diversified livelihoods and improved food security. Goat rearing is anticipated to provide a stable non-bushmeat source of protein. Farmers in the program will also be able to increase family income through selling of drought-tolerant legume crops (e.g., new varieties of cowpea, pigeon pea, groundnuts, and sorghum). Through the socioeconomic study conducted in FY11 the project will know the current income situation of the communities studied and from which resources they derive their income.

- New goats distributed in Nairoto Administrative Post: Xixano (30 goats) and N'tele (60 goats), and previously distributed goats monitored
- Plans made for how to support improved management of goats to mitigate environmental impacts
- Vegetable production increased with irrigation
- AESA data retrieved for each FFS group (12)

Activity 1.3.3: Training in conservation agriculture for farmers (each selected community) and agro-extensionists (1 per district). The major focus for FY13 involves establishment and technical support to Farmer Field Schools, with emphasis on climate smart agriculture (i.e., adaptation and better yielding, drought tolerant crops). The geographical focus in FY13 is on 12 villages. CVCAs have been undertaken in sites representing all the agroecological zones represented by these villages. These include the administrative post of Nairoto (3 villages in Quirimbas Corridor), administrative post of Negomano (2 villages in Quirimbas Corridor), Pundandar (1 village in Quirimbas Corridor) and Chipanje Chetu (5 villages in Niassa Corridor) and Marrupa (Niassa Carnivore Project – 5 villages). The Farmer Field Schools will be the major focal points for provision of technical support in conservation agriculture as an adaptation strategy, enabling communities to undertake practical on-farm experimentation with climate smart agriculture. In these communities, these Farmer Field Schools will carry out the functions of Risk Management and Adaptation Committees.

In line with the Government of Mozambique agriculture strategy, CARE will provide training to government agricultural researchers and extensionists, who will in turn support community Farmer Field Schools in Cabo Delgado and Niassa. WWF and CARE will, jointly, train farmers and government agriculture extension officers in conservation agriculture techniques and will assist the extension officer to implement in each of the selected villages. The program intends to employ all techniques that will begin from field preparation to production techniques and improved storage.

Expected Output/Results:

- Government research and extension staff, and community members of Farmer Field Schools trained in conservation and climate smart agriculture
- Development of community-based results demonstration plots
- Increased yields in good agricultural years, and reduced variability in yields in years of poor rainfall
- Greater agro-biodiversity and reduced loss of habitats through reduction in slash and burn agriculture
- Increased knowledge on conservation agriculture techniques among farmers and field officers

Level of Effort for Objective 1.3: Total \$44,503 (USAID \$44,503; WWF match \$0)

List of Key Staff Involved:

CARE Mozambique Office

Mr. Chaluco Bachir, AENA Field Officer

Mr. Mario Basilio, SCAPES CARE Officer

Mr. Nic Dexter, CARE Northern Regional Coordinator

WWF Mozambique Office

Mr. Tiago Lidimba, SCAPES Project Executant, Mozambique

WWF CEA GI:

Mr. Jason Rubens, Climate Change Adaptation Coordinator, CEA-GI

Mr. Roberto Zolho, Ruvuma Landscape Coordinator, CEA GI

WWF Tanzania:

Mr. Cyprian Malima, Project Executant, Tanzania

Mr. Nalima Madatta, Project Technical Assistant, Tanzania

WWF-US:

Ms. Erica Rieder, Program Officer, Coastal East Africa Program

Ms. Sarah Freeman, Program Officer, Conservation Science Program

Objective 2: Assist stakeholders along corridors in implementing the management techniques necessary to establish and maintain biodiversity corridors over time, while helping to improve food security.

WWF-US and the CEA GI have developed a more comprehensive Ruvuma Landscape program during FY12. To improve the coordination of the multiple projects now occurring in the region, WWF-US and the CEA GI developed a Ruvuma Landscape Workplan for the 2012 calendar year. The plan ensures that as we develop SCAPES work plans moving forward, all activities are in line with other WWF initiatives in the landscape. We anticipate that this will improve the sustainability and efficiency of our programs.

As part of the annual work planning process and adaptive management for FY13, WWF staff coordinating the Ruvuma Landscape began a process of reviewing the threats ranking and results chains, discussing new developments within the entire region. Though staff are concerned with a noticeable increase in elephant poaching and illegal logging, a more thorough review of the threats are needed in FY13. We will provide an update on our progress in the FY13 semi-annual report. We determined that the threats ranking are viable as previously submitted, until a more comprehensive review is done in FY13.

There are two sub-objectives under Objective 2, focusing on Mozambique (2.1) and Tanzania (2.2), and activities under each are assigned to a particular strategy. Taken together, the collection of strategies supports the achievement of the major objective, which is to establish and maintain biodiversity corridors, while helping to improve food security. The major strategies we are implementing under SCAPES include: improved land use planning, community-based natural resource management, human-wildlife conflict mitigation, and developing community incentives. Illustrative activities under these strategies include protecting elephant habitat, developing village level zoning and land use plans, strengthening community based organizations, and facilitating HWC mitigation, conservation agriculture and early burning programs. These activities have been designed to assist stakeholders to establish and maintain corridors, improve food security, and reduce threats to biodiversity. Our aim is to address the links that stem from poor governance and poor planning that affect, for example, the proximity of human settlements to wildlife habitats or high needs for household income and food that drive communities to choose short-term survival solutions such as slash and burn agriculture and retaliations against wildlife and therefore put tremendous pressure on key species and ecosystems.

Land use planning that engages local communities is the basis for establishing appropriate land uses in the corridors that do not threaten wildlife and that minimize disturbance to the natural diversity of the areas. Land uses in each area need to be appropriate and compatible with sustainable resource use (conservation agriculture, community development activities, and ecotourism), improving human wellbeing while better conserving wildlife habitats and

maintaining species/population connectivity, and maintaining viable elephant populations and biodiversity corridors in the region. The zoning of large areas, such as the corridors, ensures that each sub-zone has its most appropriate land use promoted and improves the separation between incompatible land use activities, such as human use areas and areas exclusively for wildlife conservation.

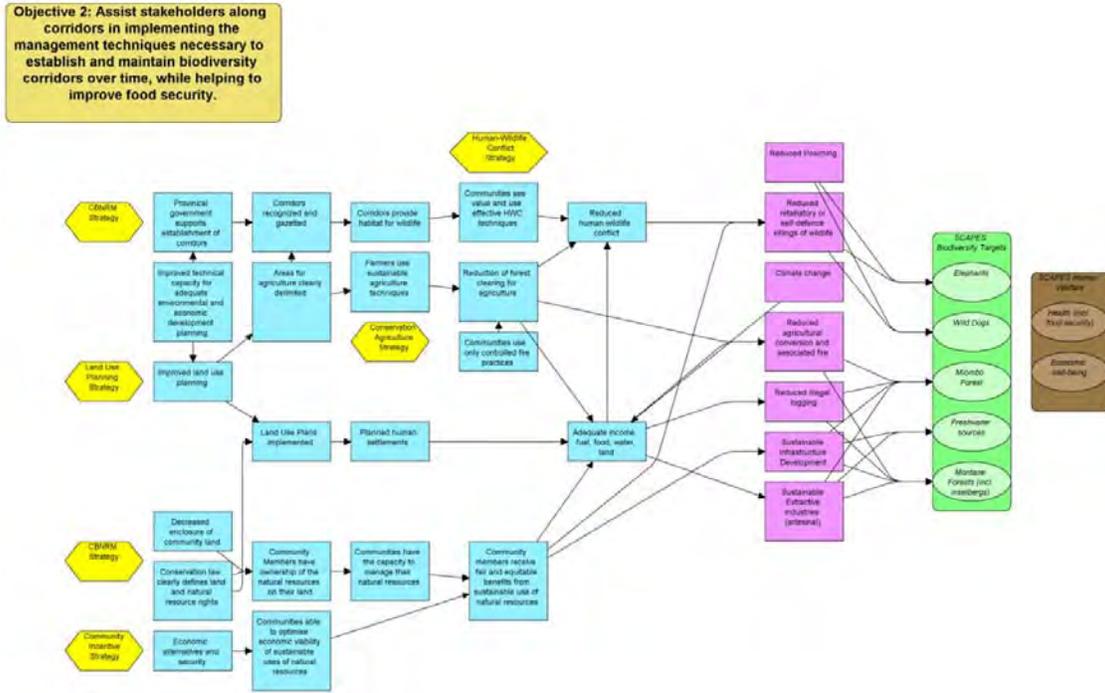


Figure 3. Results Chain showing how Objective 2 activities are expected to contribute to reducing threats and to conserving biodiversity targets

Level of Effort for Objective 2: Total \$579,811 (USAID \$221,330; WWF match \$358,481)

Objective 2.1: Assist stakeholders along Mozambique’s corridors to implement the management techniques necessary to establish and maintain biodiversity corridors over time

The Chipanje Chetu Corridor (Map 1) has been granted to local communities (650,000 ha.), but the challenge has been to find a valid legal framework for a community-managed wildlife concession; land and wildlife rights do not go together under current law. The national-level Conservation Policy will allow for Community-managed Conservation Areas; however this awaits the National Conservation Law to implement it. The Conservation Law will be submitted to the Council of Ministers in November, if approved it will go to the Parliament between March and May 2013. WWF Mozambique is engaged with revising drafts of the Law and is championing the amendments at regional levels. This is complimentary to work at the National level by Maputo based staff. WWF is thus engaging in several ways with regard to the incoming conservation law.

On the Quirimbas-Niassa Corridor, the potential corridor geography has been defined but as the corridors are not under legislation, the legal format is not defined. This also has to wait for the approval of the National Conservation Law and will be revisited then. Should the

National Conservation Law eventually include corridor provisions, the geography of the corridor will need to be approved and verified by the government.

Until it is submitted to the Council of Ministers in early FY13, WWF staff will continue to advocate for and advise on changes in the National Conservation Law, as this has considerable impact on the proposed corridor zones and subsequent management potential. In the meantime, as work is being done at the policy level, WWF will assist stakeholders living in the biodiversity corridors to establish and maintain them, through a suite of related activities that reduce habitat destruction by reducing shifting agriculture; improve food security and hence reduce hunting pressure; and reduce uncontrolled fires. We will do this by working with villages in both Mozambique and Tanzania to strengthen community institutions for more effective and participatory project implementation; raise awareness of laws and policies around HWC, develop participatory land use plans, consolidate fields to make them easier to protect; support use of innovative methods to prevent damage by elephants; undertake early burning to keep elephants away from crops; and expand conservation agriculture practices in the villages to raise agricultural productivity and household incomes. Part of this work will be achieved by working in partnership with government agencies, in particular, with district level Agriculture Extension Offices to facilitate their training and food security efforts via the development of Farmer Field Schools.

Activities

In FY13 WWF will:

CBNRM Strategy

Activity 2.1.1: Implement one stakeholder workshop with key partners of the Mozambique corridors (at both Provincial and local levels). This activity was completed in FY10 and reported in the FY10 Annual Report.

Activity 2.1.2: Revitalize COGECO and continue to strengthen community based organizations in the 5 villages (Matchedje, II Congresso, Liyumba, Maumbica, Nova Madeira) to ensure sustainability of livelihood strategies and NRM activities. COGECO, the Chipanje Chetu Management Community Council was established in 1998 under the auspices of an IUCN/Governmental Department for Forests and Wildlife Management (SPFFB) program, and is a legally recognized umbrella organization that represents the five Chipanje Chetu communities. These communities are targeted by the SCAPES project over the period of the project life span. Its intended function is to represent the interests of the communities, to negotiate on behalf of the communities with regard to NRM and private enterprise engagement on community lands, and to monitor the livelihood activities happening in each represented village. While this group functioned well in its early years, as of 2009 it has largely been dysfunctional as it lost its leadership to corruption scandals. In result, relations with the communities have been poor as they bore the brunt of the consequences of the corruption. However, the mandated role of COGECO has not changed. In 2010, the current operator, Lipilichi Safaris (with a 10 year contract) channeled approximately \$50,000 to COGECO in concession fees (this amount excludes tourism overheads and trophy fees). Given the importance of this organization, and that it is a representative body for the individual village committees that SCAPES works with, the program will engage with COGECO and assist in

reconstituting its leadership, and developing more transparent negotiation and revenue sharing procedures.

In FY11, WWF revitalized the five independent village level management committees within COGECO, and in FY12 we rebuilt the management structures of COGECO itself, and relations between COGECO and the five village committee.

In FY13, WWF will further build the capacity of these five communities by providing trainings to improve sustainable resource management and management of community-private partnership with a local safari operator. Also in FY13, Lipilichi Wilderness Safaris has agreed to work more closely with WWF and CARE to support community agricultural developments within Chipanje Chetu.

Expected Outputs/Results:

Ensure that COGECO, a key community-based organization in the Niassa Corridor representing NRM and sustainable benefits to communities from natural resources is a trusted partner and practicing good governance.

- Two trainings conducted in each COGECO village on the following topics: sustainable use of natural resources, fund management, and how to develop community-private sector partnerships.

Land use Planning Strategy

Activity 2.1.3: Move forward with land use zoning in partnership with the Provincial Directorate of Environmental Affairs and CENACARTA for Pundanhar, N'tele, Xixano (Cabo Delgado) and II Congresso and Matchedje (Niassa). In FY12 MICOA completed the land use plan for the whole of Sanga District, including Chipanje Chetu. This plan is available in hard copy, but not yet available in soft copy. The Minister of Agriculture is also currently undergoing Agro-Ecological Zoning for Chipanje Chetu. The zonation consists of identifying the potential areas for different agricultural practices and identifying the types of crops that will be introduced in this area. WWF is currently waiting on the final report, and will provide to USAID when it becomes available.

The demarcation of village boundaries and PRA assessment of general land uses in the target villages completed in FY11 were not used this year to move forward with community zoning and management plans. WWF decided in FY12 that, given limitations on funding and staff time, finalizing of district land use plans and the agro-ecological zoning in districts where we work would be sufficient.

Though WWF will not be continuing with village-level landuse plans under this activity, WWF will continue discussing with the Millennium Challenge Account (MCA) about the possibility of extending their role in Mozambique to the Niassa Corridor. The MCA compact agreement with Mozambique conducted land delimitation for each community in Chipanje Chetu in FY12, and WWF hopes this activity can be replicated in the Quirimbas Corridor's Montepuez district in FY13.

Human-Wildlife Conflict Strategy

Activity 2.1.4: Continue implementing HWC mitigation programs in target villages, and support the use of MOMS by community rangers. Farmers trained in FY11-12 (across the target SCAPES villages) will continue to receive assistance and supplies in FY13, and WWF will work this year to improve monitoring the success of these initiatives in FY13. Understanding whether these sorts of mitigation methods are viable over the long term is important, as many other methods have failed to be useful after relatively short periods of time due to elephant habituation to the particular technique or lack of readily availability low-cost materials. With support from the farmers, WWF will assess the longevity of two promising methods, the low-tech acetylene-oxygen canister and fire crackers. Support will continue to be given to the farmers of the Chipanje Chetu villages of Nova Madeira, Matchedje and Lilumba, and II Congresso. WWF will also continue to facilitate the creation of block farms in the Niassa Corridor. This method of farming is meant to reduce HWC by making fields easier to defend.

In the Quirimbas Corridor, WWF will continue to work with community rangers in the development and implementation of the MOMs system, and will expand its use into two Chipanje Chetu communities, II Congresso and Matchedje. MOMS is used to monitor elephant presence, movement and crop damage, as well as the illegal killing of elephants.

Expected Outputs/Results:

Farmers engaged in HWC mitigation program and see HWC as a problem to be solved themselves, rather than relying on outside institutions of the government. Mitigation efforts contribute to reduce the following threats: human elephant conflict, hunting (e.g., elephant killings) and loss of crops.

- Continued support and monitoring the effectiveness of HWC mitigation methods in four Chipanje Chetu communities.
- Intensify the mobilization of communities to use block farming
- Two additional villages skilled in HWC mitigation and implementing HWC mitigation techniques (chili pepper fences, fireworks), leading to reduced amounts of crop damage as well as death of people and wildlife.

Conservation Agriculture Strategy

Activity 2.1.5: Assist the District Department of Agriculture (SDAE) to establish pilot conservation agriculture farms, or Farmer Schools, in target villages. In FY12 a new agricultural policy was issued that specifies how training and extension work should be applied in the Districts. This new policy reflects the Government's desire to provide technical assistance to local communities in meeting food security needs, and its decision that among the most cost effective means to achieve this is to establish pilot farms, or a centralized point, where community members can be exposed to and observe and monitor the success of new farming techniques. Exposure will be enhanced through "Farmer Field Days," where specific villages will be supported in learning new techniques. Given this development, WWF has responded with a slightly modified approach in delivering its conservation agriculture message within the corridor zones. This modified approach compliments (and extends to two

additional villages), the Farmer Field Schools described and adopted by CARE as written above in Activities 1.3.1 and 1.3.2.

Working with the District Department of Agriculture (SDAE), private partner Lipilichi Wildlife Safaris, and CARE, WWF will identify suitable areas to establish pilot farms, which will be staffed and supported by that SDAE. WWF will also conduct outreach on behalf of the SDAE to promote this new approach, and will specifically target the villages and farmers SCAPES supported from FY10-12. We will also provide technical assistance to the District Extension Officer (DEO) in establishing conservation agriculture methods on site (described under Activities 1.3.1 and 1.3.2), and facilitate the DEOs work program by providing farming supplies and logistical support. The presence of this farmer's school also presents the opportunity to embed HWC and MOMS knowledge within agricultural extension programs, and WWF will encourage their adoption as part of the formal training offered by these Farmer Schools. This provides an opportunity to significantly scale up our impact across the districts and better ensure sustainability beyond the life of SCAPES.

Expected Outputs/Results:

Principles of conservation agriculture embedded within government extension programming and its benefits realized by communities in the corridors, which leads to reduced shifting agriculture and improved farm yields over time.

- Two additional pilot farms, or Farmer Schools established that demonstrate improved seed varieties and conservation agriculture techniques.
- District supported to implement new agricultural policy that will address food security needs and that can benefit a broad audience.
- HWC mitigation methods integrated within two established pilot farms

Activity 2.1.6: Refine burning management training seminars. Early burning has been promoted in the Quirimbas Corridor under SCAPES, and we will continue to improve farmers' capacity to conduct burns in an appropriate manner to reduce the likelihood of negative effects to grassland dynamics. In FY13 WWF will continue to provide expertise in burn management by leading basic seminars on controlled fires in the villages of Chipanje Chetu in the Niassa Corridor. Following these trainings, each village will be encouraged to do early burning in selected village lands. Early burning reduces the likelihood of negative impacts from hot late season fires as the amount of dry matter is less and improves grazing for wildlife and livestock. To raise awareness about early burning even more, WWF will capitalize on the radio network in the Chipanje Chetu area to disseminate information about the value of early burning.

Expected Outputs/Results:

Early burning is implemented across large segments of the eastern corridor and leads to reduced human-elephant conflict by providing alternative food sources for elephants during the dry season, which in turn leads to reduced crop loss for farmers.

- Four early burning seminars completed
- Twenty radio messages delivered across the Chipanje Chetu area

Land-use Planning Strategy

Activity 2.1.7: Facilitate monitoring of illegal activities in the corridors, leading to the protection of critical elephant/wildlife habitat. In FY12 a multi-sectoral law enforcement coordinating body was established in Maputo to gather information about illegal activities in northern Mozambique’s Niassa and Cabo Delgado Provinces, and then respond with on-the-ground law enforcement measures. To streamline efforts, this SCAPES activity will be covered through the “Stopping the Slaughter” project funded by the Wildcat Foundation.

In the Niassa and Quirimbas Corridors, WWF will continue to support coordination of multi-sector teams composed of relevant central government ministries, the Niassa Reserve Authority, Lipilichi Safaris, District officials and Wildlife Conservation Society (WCS) to improve information on illegal activities in the landscape, and facilitate community ranger patrols to address these issues.

Expected Outputs/Results:

Government agencies, the private sector and communities work together to reduce the level of illegal activities in the corridors so that critical habitat and populations are protected.

- In Niassa Corridor, a multi-sector team continues to operate coordinate and fund the monitoring of illegal activities.
- In Quirimbas Corridor, a multi-sector team monitors and reduces the occurrence of illegal activities.

Level of Effort for Objective 2.1: Total \$460,094 (USAID \$142,708; WWF match \$317,386)

Objective 2.2: Assist stakeholders along Tanzania’s corridor implement the management techniques necessary to establish and maintain biodiversity corridors over time.

Under this program, WWF is currently working in three villages (Mtua, Kilimarondo, and Nahimba) along the Niassa-Selous Eastern Corridor, applying elements of land use planning, community based natural resource management, human-wildlife conflict mitigation, and developing community incentives strategies. In addition to direct work with communities, the program collaborates with selected key partners such as Lukwika/Msanjesi and Selous Game Reserve and local government authorities.

In FY13 WWF will continue to assist stakeholders to establish and maintain biodiversity corridors between Niassa-Selous and support the communities that live there. WWF activities draw from a suite of strategies to help communities improve land use plans, proficient with more diverse income generating activities (IGAs), build capacity for and support of HEC enumerators, and develop the capacity of Village Natural Resource Conservation Committees to make better decision related to resource management.

Activities

In FY13 WWF will:

CBNRM Strategy

Activity 2.2.1: Building on the prior sensitization work with communities, strengthen the management of the envisaged NDONDA Wildlife Management Area. In the course of implementing CBNRM for three years, the communities have broadened their knowledge of wildlife conservation and the SCAPES villages of Mtua, Nahimba and Kilimarondo have unanimously agreed to set aside 175,371 km² or 17,537.1 ha of their village lands to be annexed to NDONDA WMA, covering an area of 595,371 km².

In FY13 WWF will continue to support capacity building of Village Natural Resources Conservation Committees (VNCRCC) through training on management, governance, accountability and conservation skills. Communities from the nine participating villages making up the NDONDA WMA will be facilitated to review the CBO constitution and present the revised constitution to the respective village assemblies for endorsement. WWF will assist these communities to identify economic investment opportunities within the village lands after the development of Resource Zone Management Plan (RZMP) for NDONDA WMA (Activity 2.2.2). WWF will start sensitizing communities on the newly revised Wildlife Regulations (2012) and Wildlife Conservation Act (2009). The trainings are important for better understanding the best practices of managing Wildlife Management Areas in accordance with the existing national legislations. A focus for WWF in FY13 will also be the implementation of a WMA monitoring system that will be developed for WMAs across the country and can be used by VGS to improve their effectiveness in managing the WMA area.

Expected Outcomes/Outputs:

VNRCCs undertake planning and oversee sustainable utilization of wildlife and other natural resources in their respective villages.

- VNRCCs are a recognized voice in the process of gazetting village lands into Wildlife Management Areas.
- VNRCCs have the capacity to negotiate with potential investors in the envisaged NDONDA Wildlife Management Area.

Land-Use Planning Strategy

Activity 2.2.2: Finalization of land use plans in target villages along the Selous-Niassa Eastern Corridor in preparation for the establishment of NDONDA WMA. It is Tanzanian government policy that each village should have a functional village land use (LUP). Unfortunately due to financial constraints the Government has not been able to fulfil this obligation. The existing LUP documents for Nahimba, Mtua and Kilimarondo villages were prepared 5 years ago by the Participatory Forest Management (PFM) and Property and Business Formalization Programme (PBFP), prior to the SCAPES program. In FY12, WWF and the Nachingwea District Participatory Land Use Management (PLUM) team reviewed and revised land use

plans for these villages along the Selous-Niassa Eastern Corridor to incorporate recent progress on extending the area under WMA status.

In FY13 WWF will facilitate the process of approval and endorsement of the documents by the Nachingwea District Council and National Land Use Commission. WWF, in collaboration with the Nachingwea District Council and communities will develop proposals for future natural-resource based alternative livelihood activities based on lessons NDONDA WMA members learned from exchange visits in FY12.

WWF will also take the next step in formally establishing the NDONDA WMA by having the RZMP finalized. This will be completed during FY13 with match funding.

Expected Outputs/Results:

Land use plans reflect current law and provide the basis for informed decision making in village lands.

- RZMP created for NDONDA WMA (match funding)
- Approval and endorsement of NDONDA WMA LUP by the Nachingwea District Council and National Land Use Commission
- By-laws for management of the proposed NDONDA WMA accepted

Activity 2.2.3: Support the development and enforcement of land use plan by-laws in the target villages. This activity has been subsumed within Activity 2.2.2, as the joint review described therein will lead to the official acceptance of the planning provisions, and therefore will be the official planning documents considered by VNRCCs and other committees in decision making. The VGSs, once the District and VNRCCs have recognized the revised plans, will be able to supervise the implementation of the provisions within. VGSs, per village by-laws, are empowered to address potential violations of land use plans and when/where necessary, they seek the outside assistance of District law officials. The preference is for disputes to be settled internally, and fines are assessed based on the scale of the offense.

Community Incentive Strategy

Activity 2.2.4: Support implementation of identified appropriate biodiversity friendly alternative income generating activities (IGAs). Building on FY11 and FY12 experiences and achievements in implementing environmental friendly alternative income generating activities (i.e., Village Community Banks-VICOBA, Livestock (cattle, dairy, and chicken) keeping, and fish farming) in the three villages of Mtua, Nahimba and Kilimarondo, WWF envisions strengthening and scaling up these activities within and outside nearby villages during FY13. At least four farmers (Trainers of Trainers) from chicken-keeping groups will be supported to attend a one month training in Dar es Salaam on the use of kerosene incubators and handling brooding/young chicks.

Lessons learned will be collected on how members of the 5 Village Community Banks (VICOBA) groups are benefiting from the loans provided by the respective VICOBA groups. These loans are used by individuals or households in supporting their development projects which range from small retail shops of assorted items, chicken farms, piggery, chicken, and food vendors. The program will provide training and support to new additional VICOBA groups in these villages when requested by

the communities. Additional IGAs may be developed, as identified through a participatory process that includes various potential user groups within the communities and the Nachingwea District Authority. The Nachingwea District relevant staff will also be supported to provide technical backstopping to the rural communities in the course of implementing IGAs in FY13.

Expected Outputs/Results:

- Increased household revenues that will enable communities to reduce dependence on natural resources as source of their livelihood.
- District technical staffs provide backstopping on the implementation of IGAs in Nachingwea District.
- Improved monitoring of all IGAs.

Human Wildlife Conflict Strategy

Activity 2.2.5: Support Human-Elephant Conflict (HEC) enumerators. SCAPES is supporting the documentation of HEC incidences in 22 villages across nine wards (five in Nachingwea and four in Nanyumbu Districts). In FY12 challenges within the Tanzania Country Office caused delays in paying the HEC enumerators, which affected data collection. In FY13 this should no longer be an issue and HEC enumerators will fully be engaged to document HEC incidences as well as monitoring on the use of novel HEC mitigation techniques. WWF anticipates that data collected will contribute to a growing database of HEC for the region. The data is provided to District officials to help them design appropriate interventions, including decisions relevant to where, when and which intervention measure to employ. Eventually the program of HEC mitigation will be incorporated into the respective District Annual budget development plans. A refresher course on the data collection will be conducted for all six HEC enumerators.

Expected Output/Results:

Decision makers actively participate in and hear from communities about the benefits of HEC mitigation and incorporate them into their portfolio and budgets.

- Spatial and temporal distribution of HEC incidents within the Selous Niassa corridor identified.
- Number of people killed or maimed by elephants established or known.
- Number of elephants killed or wounded during protection of human life and property known.
- Number of hectares (by crop) destroyed by wild animals known.
- HEC hotspots in the area established.

Activity 2.2.6: Continue to support the use and development of HEC methods. In FY13 WWF intends to use early novel HEC adopters to continue scaling up mitigation techniques within and nearby villages. Lessons learned from the previous (FY10-12) interventions have indicated that rural communities accept HEC mitigation techniques that use locally available materials and have less donor dependency. In view of this, communities' find that chili-dung bricks and windblown ash-chili techniques are most useful to keep away elephants from agricultural crops. Chili-rope fences are also useful but the oil used is not readily available unless supplied by the project. WWF will help conduct exchange visits to share techniques among villages.

Expected Outputs/Results:

Farmers employ novel human elephant mitigation techniques to complement the traditional ones resulting in reduction of elephant raids in agricultural fields.

- Continued use of elephant non-palatable crops (sesame, chili and sunflower) which are cash crops and increase cash flow to households.
- Successful mitigation of HEC incidences by farmers employing novel HEC techniques.

CBNRM Strategy

Activity 2.2.7: Facilitate exchange visits of targeted villages of Nahimba, Kilimarondo, and Mtua villages to northern Mozambique to share lessons on conservation agriculture, human elephant conflict mitigation, rain harvesting, and income generating activities. This activity was completed and reported on in the FY12 Annual Report.

Activity 2.2.8: Support in-service training of 40 village game scouts (VGS) from Nahimba, Kilimarondo, Nakalonji and Mtua villages on patrols, identification of poacher signs, recording field data. This activity will not carry forward under SCAPES given USAID guidelines related to support of law enforcement actions. Supported with other funds from FY12.

Activity 2.2.9: Support at least 20 Village Game Scouts to undertake a 6-week training course at Likuyusekamaganga Wildlife Conservation Training Centre. This activity will not carry forward under SCAPES given USAID guidelines related to support of law enforcement actions. Supported with other funds from FY12.

Activity 2.2.10: Facilitate implementation of best practices learned from exchange visits. In FY12 farmers from Tanzanian SCAPES villages were exposed to conservation agriculture practices (i.e., block farming and non shifting farming, zero tillage, improved seeds and organic manures), rainwater harvesting and preservation, and benefits of natural resources conservation undertaken by the Chipanje Chetu communities in Mozambique. VNRCC and village leaders who visited JUKUMU WMA in Morogoro region shared experiences with their hosts on WMA management, accountability and governance, and investor contracts. The visiting team learned about the distribution of revenues accrued from the use of wildlife and other natural resources occurring in their village lands (50 percent of the total revenue is reinvested into conservation and the remaining 50 percent is distributed equally among the WMA participating villages.)

In FY13 WWF will embark on promoting conservation agriculture lessons learned in Nahimba, Mtua and Kilimarondo villages. WWF will also support communities on applying the best practices of rain water harvesting techniques.

Expected Outputs/Results:

- Lessons learned from exchange trips applied towards improving the management structure for NDONDA WMA.
- Implement selected livelihoods activities learned from exchange trips

Activity 2.2.11: Support Village Game Scouts to implement their roles as stipulated in the revised Wildlife Regulations 2012 in NDONDA WMAs. All villages selected village game scouts in accordance with the existing Wildlife Management Areas regulations. These scouts are charged with several activities including protecting wildlife within and outside WMAs, supervising hunting, problem animal control, and collecting wildlife data. During FY13 WWF will undertake in-situ training of village game scouts on field data collection and report writing, problem animal control and sustainable use of natural resources. WWF will provide field equipment for the scouts (e.g. tents, boots, sleeping mattresses, rucksacks and uniforms).

Expected Outputs/Results:

- Wildlife data and event resource book established in the villages on which to base hunting quota.
- Reduced illegal utilization of wildlife and other natural resources in the village lands.
- Scouts actively engaged in the management of the Wildlife Management Area.

Level of Effort for Objective 2.2: Total \$119,717 (USAID \$78,622; WWF match \$41,095)

List of Key Staff Involved:

WWF Tanzania

Mr. Cyprian Malima, Project Executant
Mr. Nalima Madatta, Technical Assistant

WWF Mozambique:

Mr. Tiago Lidimba, SCAPES Project Executant, Mozambique
Mr. Geraldo Chizango, Project Executant, Lake Niassa Reserve

WWF-US

Ms. Caroline Simmonds, Deputy Director, Coastal East Africa Program
Ms. Erica Rieder, Program Officer, Coastal East Africa Program

Objective 3: Promote sustainable finance mechanisms for the maintenance of ecological processes in the Ruvuma landscape.

New developments in sustainable finance mechanisms bode well for developing funding streams in support of protected areas, which would include corridors, given legal representation of corridors in Mozambique's National Conservation Law. In FY11, with the technical support of WWF, the Government of Mozambique created the BIOFUND, the first fund with the sole purpose of supporting conservation and broader environmental management aims. On August 9, 2011 the Mozambican Council of Ministers officially approved registration of BIOFUND as a foundation. The Inaugural General Assembly was held December 15, 2011 and in March 2012 the BIOFUND was granted Public Benefit Status. A Board of Directors, Oversight Council, and General Assembly Council have been elected. The board includes most of the original founders, including WWF. With all of this progress, BIOFUND is beginning to solicit and review proposals for funding for 2013-2016.

In FY13, WWF will continue to provide technical guidance to Mozambique’s National REDD strategy development process and will take the appropriate next steps in piloting REDD carbon projects in key areas. The activities described within this objective will help give rights over natural resources to communities and allow them to receive tangible benefits from sustainable activities. Once REDD projects are operating, they are expected to reduce a number of major threats to the biodiversity targets (forest conversion, unplanned infrastructure, logging and charcoal making) and improve community wellbeing (see the Results Chain in Figure 4 and Annex 4).

REDD activities in the Ruvuma Landscape are linked to national REDD readiness activities in Mozambique. There continue to be no REDD activities occurring on the Tanzanian side of the Ruvuma Landscape at this point. WWF was involved with assisting the Government of Mozambique in drafting the national REDD strategy document produced by the Ministry of the Environment (MICOA) during FY10. This draft strategy has gone through initial review, and has yet to be approved by the Council of Ministers. The approval of this policy is expected to happen in FY13. Some key issues to ensure that carbon projects in Mozambique are worthwhile:

1. Ownership of carbon is linked to land rights and not retained by the GOM.
2. The percentages of revenue that will go to the local level versus retained by GOM were determined to be 80/20 – a landmark decision given that for all other income (i.e., park entry fees) it is 20/80. However, certain considerations for the private sector need to be made, and this will also touch upon whether the Government is the primary implementer (as it now wishes), or whether private sector will be the primary with Government as partner.
3. Standards for monitoring, as well as national baselines established.

Our long-term aim is a fully realized national REDD Carbon Strategy, including a national forest cover and deforestation baseline, monitoring mechanisms, overall strategy, certification mechanisms, and pilot projects in the Ruvuma Landscape.

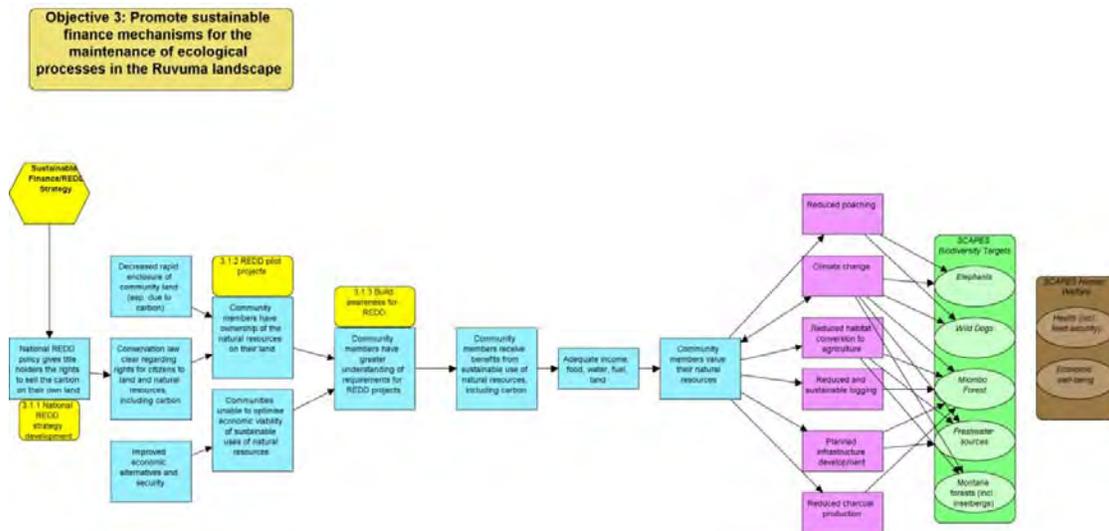


Figure 4 – Results Chain showing how Objective 3 activities are expected to contribute to reducing threats and to achieving biodiversity and livelihood targets

Activities

In FY12 WWF will:

Activity 3.1.1: Continue to provide strong input into Mozambican Steering Committee for the National REDD Strategy Development to develop a National REDD Strategy and monitoring system. Rito Mabunda of WWF Mozambique currently sits on the National Steering Committee, led by the Designated National Authority, MICOA, and in FY13 will continue to advise the committee on the development of a national REDD Carbon Strategy, including a national forest cover and deforestation baseline, monitoring mechanisms, the overall strategy, revenue sharing agreements and certification mechanisms. Another important aspect of our advocacy includes ensuring that pro-poor policies remain in the Strategy until its ratification sometime after December 2011. It is likely that the deliberations and negotiations will be lengthy; there are many layers of politics to these discussions and much is at stake. The Government will not be hasty in its decision making process.

Should the Mozambican National REDD Strategy be approved, WWF will arrange meetings and presentations on that strategy with MICOA and other relevant stakeholders.

Expected Output/Results:

Progress on the development of national REDD Strategy and monitoring plan containing strong incentives for communities to take action on forest conservation, and hence reduce threats to biodiversity targets. Also, government recognition that REDD will need to address private sector concerns and incentives, if this is to be viable. Specific strengths of the plan will include:

- Ownership of carbon linked to land rights and not retained by the GOM.
- Adequate percentage allocation of revenue for local communities, private sector and government.

Activity 3.1.2: Facilitate pilot REDD projects in Ruvuma landscape. In past years, pilot REDD sites in both Quirimbas National Park and Lake Niassa Aquatic Reserve were conceptualized. These proposals were expected to progress, however due to discussions at the policy-level within Mozambique, MICOA requested WWF to hold off on any implementation until the National REDD+ Policy has been approved by Council of Ministers. For this reason, WWF will not be further developing these pilot projects in FY13. If the National Strategy is approved in FY13, then this decision will be revisited in FY14 with consideration of match funding and staff capacity.

Activity 3.1.3: Build awareness of REDD strategy and carbon rights at village and district levels. In anticipation of REDD+ projects in Mozambique in future years, we recognize the importance of educating communities, local government officials, and other relevant stakeholders about REDD+ so they are prepared in advance of any REDD+ initiatives in their area. In FY12 a film for explaining carbon markets to local communities was developed with the assistance of Organicc, with dubbing into local languages completed. What remains is to produce this film on CD and begin to use it throughout the Ruvuma Landscape in order to build awareness of REDD and carbon rights at village and district levels.

Expected Output/Results:

- Community film on carbon markets produced on CD
- Awareness meetings held in multiple target communities targeting government officials and community members

Level of Effort for Objective 3: Total \$24,290 (USAID \$28,055; WWF match \$0)

List of Key Staff Involved**WWF Mozambique:**

Mr. Rito Mabunda, Forestry Coordinator

Mr. Tiago Lidimba, SCAPES Project Executant Mozambique

WWF-US

Ms. Erica Rieder, Program Officer, Coastal East Africa Program

Objective 4: Promote learning and sharing for improved biodiversity conservation and climate change adaptation across SCAPES landscapes and beyond.

WWF and CARE, together with partners, are developing new approaches and improved guidance on tools for climate adaptation at both landscape and local levels, with a particular focus on integration of ecosystem and human adaptation. We are building the capacity of conservation practitioners to integrate sound adaptation approaches into their conservation plans and activities, and to monitor results and manage adaptively as climate change advances. Through work in SCAPES landscapes, and more widely through ELAN, we are building capacity in the development sector, such as through InterAction, to integrate ecosystem approaches into livelihoods approaches to adaptation. Successful approaches and tools will be widely promoted among the conservation and development communities. We promote climate adaptation practices that:

- build resilience in a more sustainable way for some of the most vulnerable species, ecosystems and people in many parts of the developing world
- enable better use of ecosystem services in human adaptation
- reduce the risk of maladaptation that may bring benefits in the short term, but exerts undue pressure on species and ecosystems, and ultimately is damaging for human adaptation.

Activities***In FY12 WWF will***

Activity 4.1: Develop and pilot a climate change adaptation toolbox for practitioners. This activity was completed and reported on in FY12.

Activity 4.2: Participate in a review of adaptation monitoring. This activity was completed and reported on in FY12.

Activity 4.3: Contribute to the Ecosystems and Livelihoods Adaptation Network. This activity was completed and reported on in FY12.

Activity 4.4: Improve integration of ecosystems and livelihoods approaches to adaptation. In FY13, WWF-US will release the next iteration of its vulnerability assessment methodology based on Flowing Forward and components WWF Project and Program Management Standards. This iteration will be based on lessons learned from implementation across WWF's portfolio including the Eastern Himalayas, the Amazon, and Coastal East Africa. WWF will continue to consult with CARE in integrating people and livelihood components in our ecosystem based adaptation work.

Expected results:

Conservation and development practitioners have greater awareness of integrated ecosystem and livelihoods approaches in climate adaptation and begin to use them in their own adaptation practices.

Activity 4.5: Integrate climate change adaptation in to the WWF Standards. This activity was completed and reported on in FY11.

Activity 4.6: Fifth International Conference on Community-based Adaptation to Climate Change. We expect to send up to three SCAPES staff to participate in the Community based Adaptation conference in Dhaka, Bangladesh in April 2012. WWF will participate along with colleagues from across our Network. We do expect to share our experiences in implementing our integrated approaches learned through SCAPES implementation and other work across our landscapes.

Expected Outputs/Results (4.4-4.6)

Conservation and development practitioners have greater awareness of integrated ecosystem and livelihoods approaches in climate adaptation and begin to use them in their own community based adaptation practices.

Activity 4.7: Produce WWF SCAPES communications materials. This activity was completed and reported on in FY11.

Activity 4.8: Develop an online site for communicating and sharing across WWF's SCAPES partners. This activity was completed and reported on in FY12.

Activity 4.9: Adaptation Training. WWF-US has developed a successful adaptation fundamentals workshop for its staff and partners that lays the foundation for successful climate-smart conservation and development work. While employing easy to understand explanations of key adaptation concepts that are often misunderstood and misapplied, our workshops encourage participants to develop solutions that no longer use the past as a model, but that anticipate future change and uncertainty. To date, the workshop has been conducted 17 times on 5 continents collectively training over 900 people from WWF, partner organizations such as CARE and TNC, local and national government officials, as well as representatives from USAID, the World Bank, and UNEP. In October 2012, WWF will conduct a train the trainers course in Zambia, with separate funds, for Africans from seven countries to adapt and deliver this workshop for local audiences. Three SCAPES staff from our Mozambique country office will attend and learn how to train others on adaptation and adapt the training to local needs.

Expected results:

Greater capacity for climate change adaptation leadership in Africa and among our SCAPES Mozambique team.

Level of Effort for Objective 4: Total \$21,599 (USAID \$21,599; WWF match \$0)

List of Key Staff Involved**WWF-US**

Mr. Shaun Martin, Managing Director, Climate Adaptation and Capacity Building

Ms. Caroline Simmonds, Deputy Director, Coastal East Africa

Ms. Kimberley Marchant, Director, Field Programs

CARE-WWF Alliance

Mr. Dan Mullins, Lead, Africa Coastal Program, CARE – WWF Alliance

Activity Timeline

Timeline for Activity Implementation		2011			2012								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1.1.2	Disseminate technical information from the Ruvuma landscape climate change VA	x	x	x					x	x	x		
1.2.3	Analyze and disseminate results from CVCA's	x	x	x					x	x	x	x	
1.2.4	Integrate climate change vulnerability and adaptation awareness			x	x	x	x	x	x	x	x	x	
1.2.6	Provide technical support to WWF Tanzania in carrying out a CVCA in the Selous-Niassa corridor.								x	x	x		
1.3.1	Introduce drought tolerant crops along with conservation agriculture techniques	x	x	x	x								
1.3.2	Monitoring implementation of adaptation activities developed in FY10-FY12.	x	x	x					x	x	x	x	

1.3.3	Training in conservation agriculture for farmers and agro-extensionists	x	x	x	x	x	x	x					
2.1.2	Revitalize COGECO and continue to strengthen community based organizations in the 5 villages	x	x	x	x			x	x	x	x	x	x
2.1.4	HWC mitigation programs in target villages, and support the use of MOMS by community rangers.			x									x
2.1.5	Assist SDAE to establish pilot conservation agriculture farms in target villages.	x	x	x	x	x	x	x	x				x
2.1.6	Refine burning management training seminars						x	x	x	x	x	x	
2.1.7	Facilitate monitoring of illegal activities in the corridors	x	x	x	x	x	x	x	x	x	x	x	x
2.2.1	Strengthen the management of the envisaged NDONDA WMA	x	x	x	x	x	x	x	x	x	x	x	x
2.2.2	Finalization of land use plans in target villages along the Selous-Niassa Eastern Corridor	x	x	x					x	x	x	x	x
2.2.4	Support implementation of alternative IGAs	x	x	x	x	x	x	x	x	x	x	x	x
2.2.5	Support 6 HEC enumerators to continue and improve the capturing of HEC incidences	x	x	x	x	x	x	x	x	x	x	x	x
2.2.6	Continue to support the use and development of HEC methods.	x	x	x	x	x	x	x	x	x	x	x	x
2.2.10	Facilitate implementation of best practices learned from exchange visits.	x	x	x					x	x	x	x	x

2.2.11	Support village game scouts to implement their roles in NDONDA WMA	x	x	x	x	x	x	x	x	x	x	x	x
3.1.1	Provide strong input into Mozambican Steering Committee for the National REDD Strategy Development	x	x	x	x	x	x	x	x	x	x	x	x
3.1.3	Build awareness of REDD strategy and carbon rights at village and district levels	x	x	x	x	x	x	x	x	x	x	x	x
4.4	Improve integration of ecosystems and livelihoods approaches to adaptation	x	x	x	x	x	x	x	x	x	x	x	x
4.6	Participate in the 6th Intl CBA Conference							x					
4.9	Adaptation Training	x	x	x									

Adaptive management (including M&E)

Program monitoring by WWF under WWF's Program and Project Management Standards has been and will continue to be applied. At a country level, monitoring feeds into the annual review of projects and annual planning of activities and budgets, enabling the application of results and lessons in order to adapt and increase the project's effectiveness as it moves forward. The Standard and Custom Indicators specific to select activities form the basis of a landscape wide monitoring program, with measures specific to the individual strategies (e.g., land use planning, community incentives, CBNRM, etc.). Further, socioeconomic surveys completed in FY10-12, will provide baselines against which we will gauge impact of CBNRM strategies.

At a program wide level and based on what we learned in FY11 and applied in FY12, the team responded to emerging issues in the landscape which are reflected in changes to the overall program, but especially within the Conservation Agriculture and Land Use Planning strategies. We continue to learn from the past three years and adapt our program accordingly to improve our effectiveness, with input from our partners and stakeholders in the region.

As in past years we will revisit the conceptual model and results chains to be sure original assumptions still hold, and complete revisiting our threats analysis in FY13. We will continue to revisit these assumption over the course of this year, to ensure that our strategies are clear and aligned with the larger objectives and intended results.

At the objective level, field level monitoring will be partly be implemented using a strengthened MOMS Event Book system where possible and via District Offices where government partners lend support. Illustrative indicators include area of field damaged per year, human deaths per year, number of early burns per year, crop yields, number of new practices adopted and income saved/generated. Further development and improvement of these systems is a priority for WWF in both Tanzania and Mozambique.

Throughout the program, we have activities dedicated to sharing information learned. CARE's approaches to vulnerability or ways to address elephant-human conflict will be shared at both the community and national levels. WWF-US will also provide technical support to monitoring across all objectives, for drawing lessons and adapting them to other settings. A key role for WWF is to share information gained in different settings with local partners; activities within Objective 4 and the CARE-WWF Alliance function very well in this regard. Broad policy experience with programs like wildlife management areas in Tanzania and CBNRM projects across southern Africa will be shared with appropriate government agencies in Mozambique.

Sustainability (financial, economic, and ecological)

A number of current or planned programs in the region provide an opportunity to sustain and leverage activities on a larger program level. For example, there is investment by the French AFD in Quirimbas National Park, Sida in Tanzania, and USAID for NRM Policy work and WMA implementation in Tanzania, a SCAPES Associate. Beyond donor funding, there is continued interest by private sector partners in hunting and tourism concessions. Conservation trust funds are in development in Tanzania, and the French government committed to a debt for nature swap, under C2D, for Mozambique.

One particular development of note occurred on August 9 2011, when the Government of Mozambique approved the creation of BIOFUND, a Foundation for the Conservation of Biodiversity in Mozambique. BIOFUND has continued to develop, with an Inaugural General Assembly held December 15, 2011, and the receiving of Public Benefit Status in March of 2012. BIOFUND has now received 3 Million Euros from AFD to fund eight projects in Mozambique (proposals of which are currently being reviewed) for the period 2013-2016. As an independent foundation, BIOFUND's mission is to support the conservation of aquatic and terrestrial biodiversity and the sustainable use of natural resources, and to provide the necessary financial support to consolidate the protected area systems of Mozambique. The Foundation aims to provide 25-30 percent of the operating costs of the national Protected Areas System (PA) and other areas of high conservation value. At present, conservation and natural resource management is strongly reliant on outside donor support, which may vary over time. Within its portfolio, the Foundation will provide support to a number of core PA functions, including research and monitoring, community development, education and awareness building, tourism, as well as provisioning for PA operations and infrastructure.

The long-term vision of the WWF-CARE Alliance will launch a broader institutional collaboration to develop a transformative and replicable model for development through sustainable resource use by linking institutions, policies, markets, local-to-global governance mechanisms and stakeholders, basically linking livelihood improvement approaches and conservation approaches. The WWF-CARE Alliance is continuously learning and adapting to become stronger and more effective. On September 11, 2012 representatives from CARE

and WWF held a Summit to discuss opportunities and challenges in combining conservation and sustainable rural development. Attending the Summit were over 300 partners and other interested people from academia, the private sector, government, and NGOs. This was a very great opportunity for lesson sharing and adaptive management.

The Ruvuma Landscape program will work to promote long-term financial solutions including payments for ecosystem services, through REDD or local payment schemes, as well as hunting and/or tourism. The Governments of both Tanzania and Mozambique have established Designated National Authorities and are preparing to take advantage of the opportunities provided by the developing REDD carbon markets. Though progress in both countries on REDD has been slow, WWF is still involved with the governments to provide the needed support for REDD to succeed.

Biodiversity corridors are already key strategies adopted by governments in both countries, providing a legal environment conducive to sustaining program success. With active field and policy programs in Tanzania and Mozambique, WWF will act as a bridge, sharing positive and negative lessons with counterpart agencies and communities across the border. Experience from a culturally appropriate approach to conservation agriculture has been developed in Quirimbas National Park and has been shared with communities in the Selous-Niassa corridor. Similarly, policy insights from WWF's work with WMAs in Tanzania can be adapted to Mozambique. The two emerging trusts funds can learn from each other. The sustainability strategies will be developed for all corridors within appropriate legal frameworks for each country.

Sustainable development is harmonious development that considers the ecology of the environment with the human ecology at hand. When discrimination and violence are present, neither humans nor ecosystems can thrive. Thus the program will promote gender equity (including a zero tolerance policy for domestic violence), equitable sharing of benefits, governance and transparency, and rights according to United Nations Universal Declaration of Human Rights. The WWF Network has adopted new policies on poverty and human rights, and all SCAPES work is fully in line with these. While WWF strives to address social concerns in all its work, the WWF-CARE Alliance adds critical experience with community participation, gender sensitive development and the ability to analyze sometimes invisible power relationships. At the village level, both CARE and WWF have developed strategies and policies to ensure broad based participation, the inclusion of the poorest 50 percent in decision making processes, and gender balancing of activities.

The corridors play an important role in climate adaptation for biodiversity, creating space for wide-ranging species, creating climatic gradients along which species can migrate (even plants can migrate generationally), and preventing fragmentation of populations. They also define clear areas for human development and conservation.

For ecological sustainability, transboundary issues will require special attention, particularly in light of likely climate change effects and current large threats from poaching and illegal logging. Ruvuma is a true wilderness area with only a few points of contact and an undeveloped border that can be difficult to cross. Divided by historical experience and national language and seen as the hinterlands by distant governments in both Dar and Maputo, the Tanzania-Mozambique border has been the political divide between Eastern and Southern Africa. Yet shared cultures, ethnicities, livelihood patterns, biodiversity, geography, and developmental challenges all work to bring the area together. The reality is that both

governments share many problems and approaches in common and WWF and CARE work actively with both. WWF's experience in numerous settings has shown that a "soft" approach, such as the development of a shared large scale conservation vision, can be an effective, indeed an essential, precursor to more formal transboundary cooperation, programming and engagement. We have open discussions with WCS working in the Niassa Reserve, Wildcat Foundation, and the Aga Khan Development Network to broaden engagement in the visioning process. We believe that until a shared vision is built between the key governmental agencies, each country will proceed at its own pace, while we support regular moments for meeting and exchange, coming together, sharing and planning, and moving apart for some time to get the work done. A key role for WWF is to encourage and sustain this process so that shared cross-border programming and collaboration will become a key outcome, not the starting point of this program.

Scaling up

Work at the Ruvuma Landscape level has continued to grow in the last year, allowing key climate change strategies to be added to existing biodiversity conservation work. This work will allow for testing new approaches and methodologies to operationalize on the ground corridor development and disaster risk mitigation policies and strategies in the region. The analyses of the CVCAs in FY10-13, coupled with the Vulnerability Assessment results, will reveal important lessons for this region of Africa, and be useful to understanding potential adaptation techniques for communities living in semi-arid landscapes.

As discussed, the program has reoriented the delivery of its conservation agriculture strategy, and we anticipate that the increasing development of Farmer Field Schools will be used to disseminate not only improved farming practices, but also climate smart practices, will significantly increase the populace reached. Further, it will embed these concepts within public service programs delivered by the Government, which will greatly improve the programs sustainability and geographic scope. It is possible that the curricula developed at these SCAPES supported pilot farms could be shared across the country.

The Ruvuma Landscape program is a part of a larger effort in this landscape within which WWF, government departments, and other partners are already working. There are a number of ongoing initiatives to organize development of the Ruvuma Landscape in harmony with both people and nature.

TRAVEL

Current estimate of travel schedules is for the following trips:

WHO	FROM	TO	# TRIPS	PURPOSE
Caroline Simmonds, WWF US	US	Ruvuma Landscape	2	Program management, program coordination, site visit
SCAPES Program Manager or Director	DC	Ruvuma Landscape	1	Program management, program coordination, monitor and evaluate program progress, obtain information for technical reporting, workshop attendance
Erica Rieder, WWF US	DC	Ruvuma Landscape	2	Program management, program coordination, monitor and evaluate program progress, obtain information for technical reporting, workshop attendance
Roberto Zolho, WWF CEA GI	Mozambique	Tanzania	4	Vulnerability Assessment(s), workshop attendance, training, capacity building, sharing
Cyprian Malima, WWF Tanzania Project Executant	Tanzania	Mozambique	2	Coordination and planning, capacity building, lesson sharing
Tiago Lidimba, WWF Mozambique	Mozambique	Tanzania	2	Coordination and planning, capacity building, lesson sharing
Bruno Nhancale WWF Conservation Manager, Mozambique	Mozambique	Tanzania Northern Ruvuma	2	Coordination and planning, capacity building, lesson sharing
Program Operations	DC	Tanzania, Mozambique	1	Monitoring, reporting and capacity development

SCAPES Leader with Associates Cooperative Agreement

EM-A-00-09-00006-00

*Ruvuma Landscape
Work Plan Annexes
10/01/2012 - 09/30/2013*

for

World Wildlife Fund

Submitted: 10/1/12

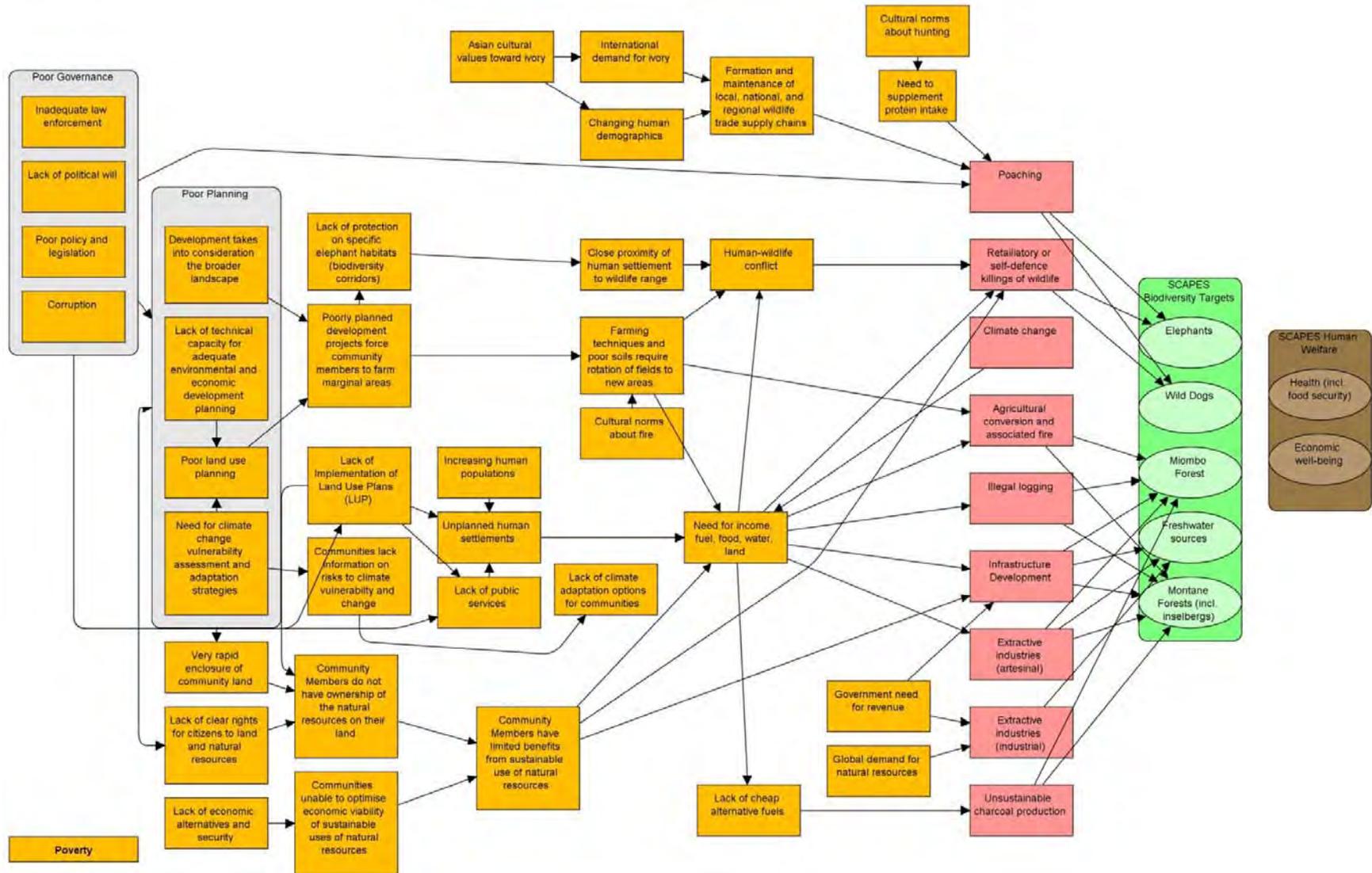
Submitted by:
Meg Symington
Kimberley Marchant



ANNEXES:

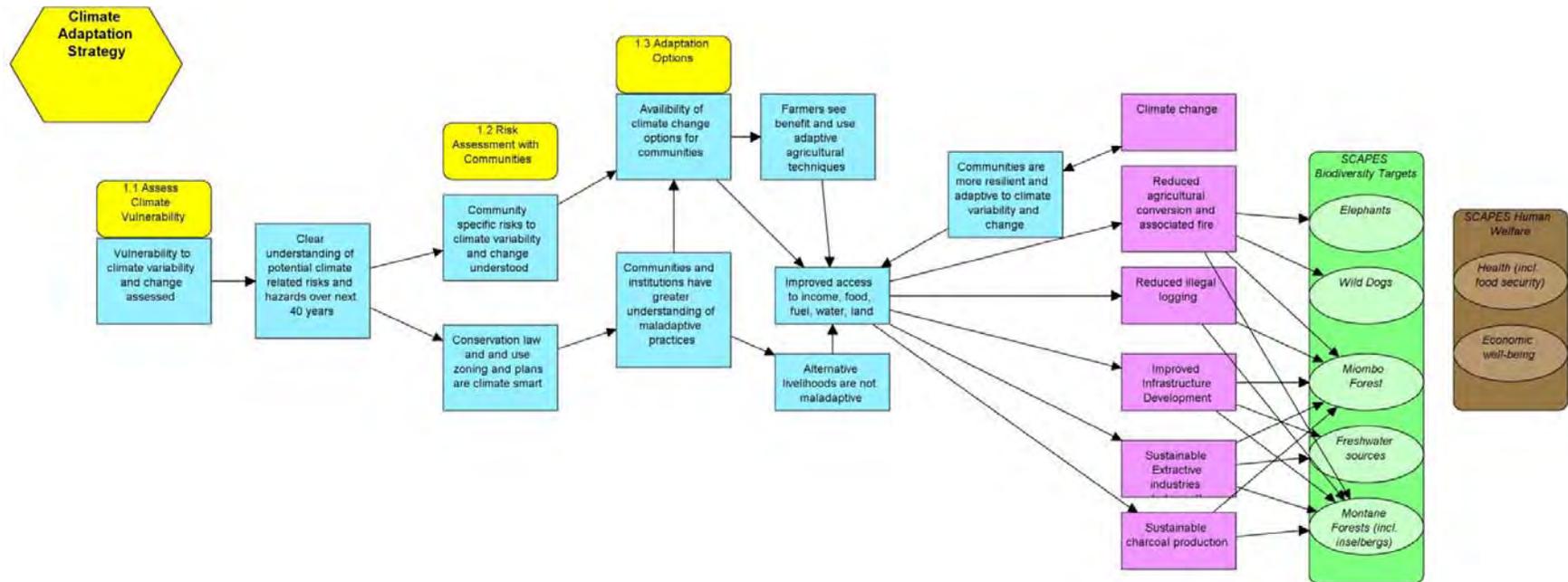
The conceptual model and results chains in the text are duplicated in the annexes, for easy comparison and in larger format.

- 1. Conceptual Model for Ruvuma Landscape**
- 2. Results Chain for Objective 1**
- 3. Results Chain for Objective 2**
- 4. Results Chain for Objective 3**

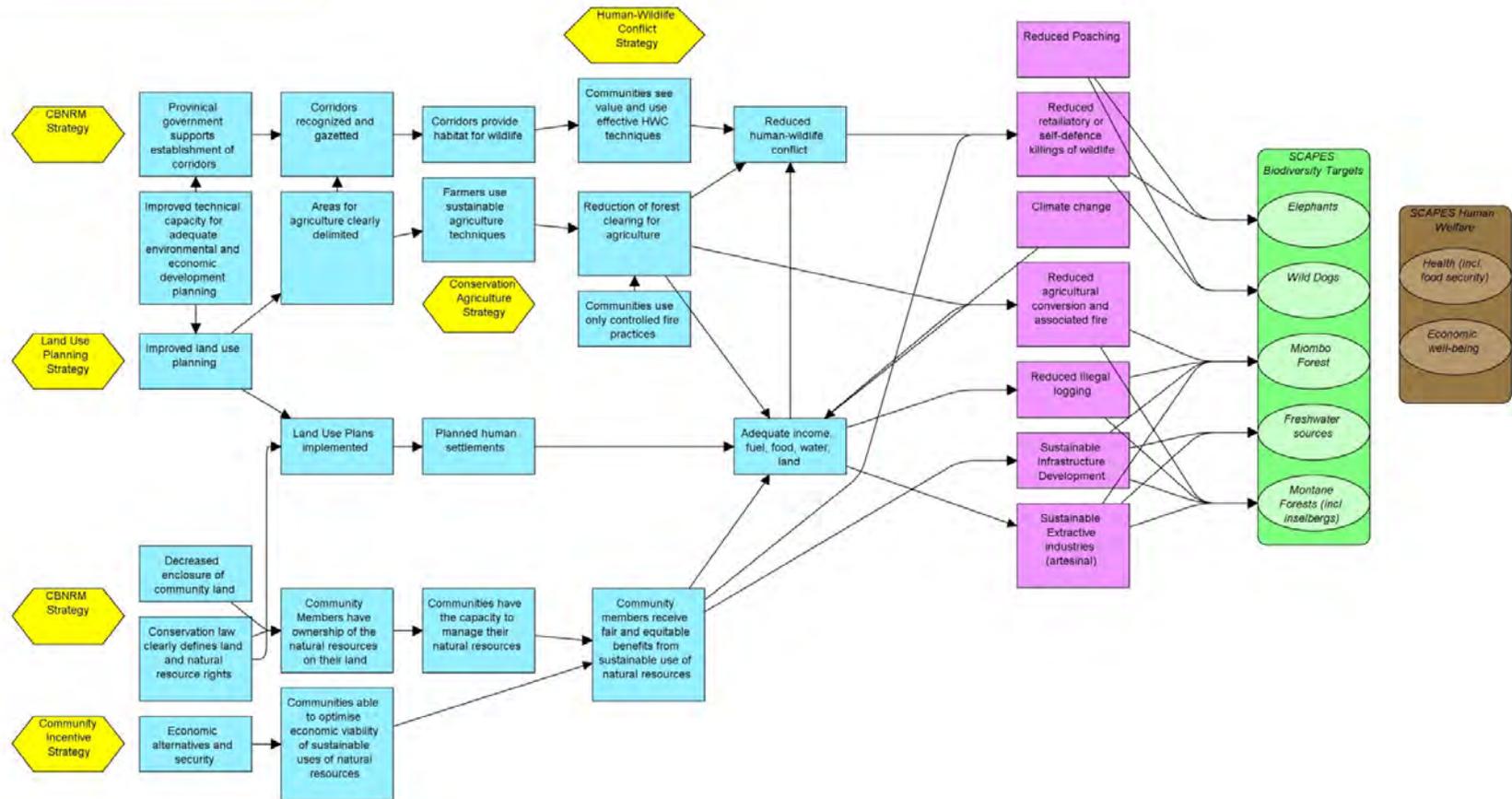


Annex 2: Results Chain for Objective 1 for Ruvuma Landscape

Objective 1: Help stakeholders gain a clear understanding of opportunities, risks and vulnerabilities due to climate variability and change along corridor areas.



Objective 2: Assist stakeholders along corridors in implementing the management techniques necessary to establish and maintain biodiversity corridors over time, while helping to improve food security.



Annex 4: Results Chain for Objective 3 for Ruvuma Landscape

