# Ruvuma[1]: For People and Nature

> **Sweeping through southern Tanzania into northern Mozambique, the flourishing forests and rivers of the Ruvuma landscape are havens for thriving wildlife and enable people to prosper in harmony with nature.**

Introduction

The Ruvuma trans-boundary landscape, shared between Mozambique and Tanzania, is possibly the most important intact and relatively unfragmented remaining space for wildlife in Africa. But it is not just for wildlife; it is home to over 8 million people[i] who depend on the Miombo forests, Coastal Forests Rivers and the lake of the region for natural resources and environmental services that sustain their livelihoods. With existing trans-border agreements and national policies there is opportunity for the Ruvuma landscape to be a truly "Living Landscape" where local peoples receive environmental and economic benefits from their natural resources that incentivise their good management.

Ruvuma: Facts & Figures

- The entire Trans boundary-Ruvuma landscape covers over 370,000km^2 [ii];
- Africa's largest conservation area, Tanzania's Selous Game Reserve (50,000km^2)[iii], a UNESCO World Heritage Site;
- Sub-Sahara's second largest conservation area, Niassa Game Reserve (42,000km^2) in Mozambique;
- Between these are corridors, community-managed Wildlife Management Areas, Village Land Forest Reserves and state-managed Forest Reserves, which enable dispersal to and from the coast;
- Ruvuma's diverse habitats include Miombo woodlands, open grasslands, riverine and coastal forests, marshes and six main rivers Hosted across these habitats are important populations of elephants, African wild dogs, lions, leopards, cheetahs, buffaloes, hippos and crocodiles. The Ruvuma River forms most of the boundary between Tanzania and Mozambique with a total length of 475 miles (765 kms).
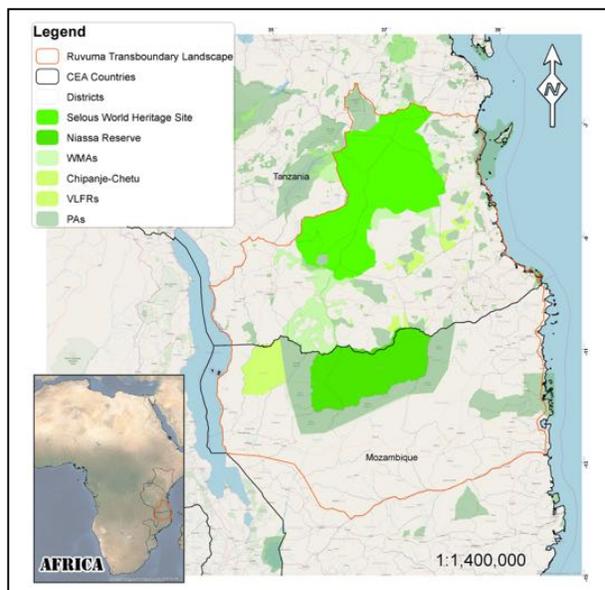
Opportunities

Supporting actions, statements and policies:

- Active transboundary working group;
- UNESCO declaration of Selous as a World Heritage Site 'in danger';
- UNESCO declaration of Quirimbas National Park as Biosphere Reserve (2018);
- Tanzania corridor legislation (2018);
- Strategic environmental assessment for Mtwara & Ruvuma regional development plans (2015-2025)
- Agreement on the co-ordinated management of the Niassa-Selous Ecosystem to create the largest wildlife refuge in the region
- Scenario plans (2014) for integrated landscape planning;

In 2006, the regional government representatives of both Tanzania and Mozambique agreed to establish a joint working group on tourism and conservation noting the need to halt environmental degradation in the context of other agreements to promote economic development and reduce cross-border crime. From this starting point have sprung many other national and transboundary policies, actions and plans as in the box.

Due to these agreements and many other national sectoral policies for Forestry, Land, Wildlife, Agriculture, Tourism, Minerals, Water and Rural Development – along with international conventions – there is a strong political enabling environment to be leveraged. The trans-boundary and extensive connectivity of habitat and wildlife movement from Mozambique to Tanzania presents potential for tourism investment. This – and improved approaches to sustainable use of natural resources in community managed areas – mean that the Ruvuma Landscape has significant potential to boost both national and local nature-based revenues in Tanzania and Mozambique.

Within the region there are several conservation INGOs (amongst others, Worldwide Fund for Nature (WWF), Wildlife Conservation Society (WCS), Fauna & Flora International (FFI) and Frankfurt Zoological Society (FZS) which have worked

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[1] The Ruvuma river is known as the Rovuma in Mozambique; however, the anglicised spelling is adopted in this document to describe the landscape

in either or both Mozambique and Tanzania for many years, building strong partnerships with governments in the areas of conservation impact, nature-based development initiatives and policy influence. These INGOs, in liaison with national and regional Governments, are seeking to build a coalition with development, research and local partner organisations to seize the potential of this landscape to deliver national economic development and protection of the natural resources to provide spaces for people and wildlife to thrive.

Problems:

Significant changes are happening to the natural resources of the Ruvuma landscape, putting pressure on local communities, habitats and wildlife:

- Recent discoveries of deposits of oil, gas and other minerals and industrial scale agriculture are driving economic and infrastructural development. These developments need to be done within planning regulations, environmental protection policies and guidance[iv] to avoid damage and degradation to the natural environment on which both local communities and wildlife depend.
- Population growth, (av. of 1.6% in southern Tanzania and (2-4.2% in Niassa and Cabo Delgado province with some districts reaching population growth of 4.3%-7.3%) leading to increased clearing of land for agriculture, illegal logging, illegal mining, collection of firewood and charcoal making coupled with weak implementation of management plans for protected areas results in encroachment into designated wildlife areas and forest reserves.
- A large dam is proposed at Stigler's Gorge in Selous Game Reserve, damaging environmental flows on the Rufiji River in Selous and beyond, which will impact the lives of 200,000 local people[v].
- New road developments through the landscape support increasing levels of extractive and private sector investments, threatening the integrity of the forests and free movement of wildlife[vi].

Data/evidence for habitat change:
- ⬇ Deforestation loss is estimated to be over 55,000ha from 2014 across the North of Mozambique[vii]
- ⬇ Deforestation for Southern Zone in Tanzania estimated at 95,799ha/yr. (2002-2013) which is 16% of national deforestation rate (469,000 ha/yr.)[viii]
- ⬇ Water availability in terms of quantity and quality in Ruvuma landscape has diminished due to damage to the water towers and over-abstraction. The average portable water availability in Southern Tanzania is about 35% below recommended levels[ix]
- ⬇ Fragmentation of, and lack of connectivity between, the key conservation areas (NEEDS DATA AND EVIDENCE)

Changes to the forests and to the freshwater systems of the landscape affect both people and wildlife. The causes of this include unregulated land use change (prioritising agriculture above natural resources) and poverty which drives unsustainable use of those resources. The communities within the landscape have limited access to basic services and livelihood options, with most people dependent on subsistence farming. The area has the highest poverty rates nationally in both countries. People are therefore particularly dependent on natural resources for their wellbeing.

Data/evidence relating to natural resource dependent people:
- ⬇ In Mozambique, the average per capita income is $540 (2018)[x], Niassa is the poorest province[xi]; in the north most households live below the international poverty line[xii]
- ⬇ Due to the climate, soils, rivers and rainfall the North of Mozambique is attractive for large scale agricultural production: over the last 10 years, the economic value of agriculture of Niassa has grown by 14%, for export, while the majority of the population continue to rely on subsistence agriculture[xiii].
- ⬇ In southern Tanzania, 13.5% of the rural population is below food poverty line, 39.5% of the population is below basic need poverty line, 23% are female headed households and majority of this population derives their livelihoods through subsistence agriculture[xiv].
- ⬇ Human population growth is among the main drivers affecting biodiversity, ecosystems and related livelihoods[xv].

Data/evidence relating to wildlife:
The landscape is a major wildlife crime hotspot in Africa[xvi].
- ⬇ In Tanzania the elephant population in the Selous-Mikumi ecosystem has declined from around 50,000 elephants in 2006 to around 15,500[xvii].
- ⬇ In 1981, Selous Game Reserve harboured a population of around 3,000 black rhinos[xviii], a recent survey[xix] estimates about 5 black rhinos now remain in the landscape.
- ⬇ The national population estimate for elephants in Mozambique is 10,438, down 48% from 20,000 over 1-6 years for the same sites[xx]. 95% of all elephant losses in Mozambique are accounted by losses in the northern ranges of the species.
- ⬇ Anecdotal evidence also suggests a drastic decline of the lion population which was once estimated to be over 6,000[xxi]

The reasons for these declines are the illegal wildlife trade (affecting elephants, rhinos and lions), poaching for bush meat, and retaliation for crop destruction or livestock depredation: driven both by the factors above (habitat loss and poverty) and also the weakness in security and management of wildlife within and without of the state protected areas.

Furthermore, climate change is a threat to ecosystems, infrastructure, wildlife and people as the weather in the region becomes increasingly drier, unpredictable and marked with severe events.

Solutions
Initial considerations of how to leverage the opportunities and overcome the problems in the Ruvuma Trans boundary Landscape identified three main strategic responses:

✓ Advocacy at national and regional levels for institutional capacity and improved implementation of existing environmental policies and legislations in relation to land use planning, land tenure rights, natural resource management benefit sharing, conservation area management plans, trans boundary timber and trade agreements and the frameworks for payment by all developers for ecosystem services, carbon sequestration and environmental damage. Building these policy frameworks into the way that regional and local Governments operate sets the enabling environment to enable natural resources to be well managed, tourism approaches to be developed and economic development to be equitable and environmentally sustainable.
✓ Capacity building and initial resourcing of community led Resource Management groups (freshwater, forests, wildlife management areas, grazing) to take on their legal role as Government representatives for managing and protecting the resources; while benefitting from sustainable access to natural resources, work in tourism and from benefit sharing from payments for ecosystem services by developers.
✓ Training in, and support of, conservation friendly, climate smart agriculture practices (agronomic and animal husbandry), prevention of unplanned/uncontrolled agricultural expansion, coupled with other livelihood options that will increase agricultural productivity, income and resilience leading to a reduction in illegal resource extraction or poaching.

When these approaches are replicated on both sides of the Tanzania-Mozambique border, there will be equity in enabling economic development, in empowering subsistence farmers, in managing the forest and riverine ecosystems and in conserving wildlife. Leveraging the existing legal frameworks for economic development and natural resources while integrating local communities as stewards who themselves benefit from natural resource management will deliver sustainable protection of the forests, freshwater and wildlife – for the present and future generations.

Expected Results from a Trans boundary Landscape Programme:
➢ Commercial and subsistence livelihood activities contributing to national and household economies, while ensuring the natural resources in the landscape are used sustainably.
➢ Green infrastructure development for resilient economic activities in the landscape.
➢ Natural Resource dependent communities improving their wellbeing, through benefits and incentives from sustainable natural resource management and conflict mitigation.
➢ Selous, Niassa and other conservation areas have intact habitats and viable connections for genetic exchange (wildlife and plants).
➢ The rivers and tributaries in the of the Ruvuma landscape have stable or improving e-flows (quality and quantity of water).
➢ Key wildlife species populations (lions, elephants, rhinos, wild dogs and endemics) able to maintain their viability

Next Steps:
If you are interested in partnering with us in the opportunities of this Ruvuma Trans boundary initiative, please contact one of us:
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The first workshop Will take place on the date of ....August 2019

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[i] World population data
[ii] Delineation of boundaries during the stakeholders meeting (GIS software computation)
[iii] https://www.tawa.go.tz
[iv] For example: https://www.forest-trends.org/bbop/bbop-key-concepts/mitigation-hierarchy/
[v] https://www.worldwildlife.org/press-releases/wwf-statement-on-decision-to-build-stiegler-s-gorge-dam-in-selous-game-reserve
[vi] "WWF Tanzania: Our Solutions". wwf.panda.org. Retrieved 2015-12-27
[vii] Desmatamento em Moçambique (2003 – 2016)
[viii] UNFCCC Forest reference Emission levels
[ix] SEA (URT, 2015)

[x] https://tradingeconomics.com/mozambique/gdp-per-capita

[xi] World Bank IOF 2014/15

[xii] DEMA-LIBA project webpage - http://www.snv.org/project/agriculture-markets-development-lichinga-balama-corridor-dema-liba

[xiii] DEMA-LIBA project webpage - http://www.snv.org/project/agriculture-markets-development-lichinga-balama-corridor-dema-liba

[xiv] WWF TCO, 2015: *Natural Resources (Biodiversity Assets) Assessment in Five WMAs in Ruvuma Landscape. Draft Report.* Prepared by Geo Network Limited and Development Associates (DASS).

[xv] WWF TCO, 2015: *Natural Resources (Biodiversity Assets) Assessment in Five WMAs in Ruvuma Landscape. Draft Report.* Prepared by Geo Network Limited and Development Associates (DASS).

[xvi] Wasser et al., 2015; CITES, 2016

[xvii] TAWIRI (2018 survey, unpublished)

[xviii] Borner, 1981

[xix] TAWIRI, 2017 unpublished

[xx] National elephant census 2014

[xxi] http://lionalert.org/alert/lions_in/Tanzania