

NON-PERMANENCE RISK REPORT

MAKAME SAVANNAH REDD PROJECT

Document Prepared By
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Project Title	Makame Savannah REDD Project
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The risk analysis has been conducted in accordance with the VCS AFOLU Non-Permanence Risk Tool, dated 19 October 2016, version 3.3. This tool assesses a project's internal risk, external risk, natural risk and mitigation measures which help to reduce risk. The risk ratings and supporting evidence are detailed in Sections A1.1, A1.2, and A1.3, below. Letters in the risk factor column correspond to the risk factor explained in the VCS AFOLU Non-Permanence Risk Tool.

1 INTERNAL RISK

Project Management		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a)	Not applicable. Tree planting is not a project activity for which GHG credits will be issued.	0
b)	Ongoing enforcement is required to prevent encroachment by outside actors.	2
c)	Management team includes individuals with significant experience in all skills necessary to successfully undertake all project activities.	0
d)	The day-to-day project activities are managed by Maasai villagers who live in and around the project area. Additionally, the project developer, Carbon Tanzania, has offices located in Arusha, Tanzania and are less than a one-day drive to the Makame WMA project area.	0
e)	Carbon Tanzania has proven capacity in AFOLU project design and monitoring, reporting and verification. Carbon Tanzania has previously implemented the Yaeda Valley Forest Conservation (REDD) project in northern Tanzania under the Plan Vivo standard. Also, the project proponents have access to forest carbon experts with TerraCarbon, who have collectively over 20 years of experience in AFOLU project design and implementation, carbon accounting and reporting. As of 2017, TerraCarbon has successfully validated and/or verified over 20 forest carbon projects under a variety of standards including VCS, ACR, CCBA, and ARB, and has provided technical advisory on a host of AFOLU carbon projects worldwide. TerraCarbon has successfully validated and verified numerous REDD projects under the VCS.	-2
f)	The project implementation is guided by the Makame CWMA Resource Management Plan, which was developed to identify and address conservation risks, and monitor progress and adapt conservation activities over time as needed. See accompanying document "Makame_RMZP". The plan was formally approved in 2017 and will be updated every 5 years.	-2
Total Project Management (PM) [as applicable, (a + b + c + d + e + f)]		-2
Total may be less than zero.		

Financial Viability		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a-d)	Project cash flow breakeven point is two years from the current risk assessment. See accompanying analysis "Makame financial viability.xls" and IRG. 2016. Analysis of WMA Financial Viability and Options Study. Produced under USAID Contract No.	0

	AID-621-TO-15-00004, Promoting Tanzania's Environment, Conservation and Tourism (PROTECT) (p. 51 "The potential impact of forest bio-carbon on Makame WMA")	
e-h)	Project has secured ~24% (i.e. 15% to less than 40%) of funding, in the form of contracted annual hunting revenue, needed to cover the total cash out before the project reaches breakeven in 2018. A business plan is in place for the Makame WMA.	2
i)	Mitigation: Project does not have available at least 50% of the total cash out before project reaches breakeven. Not applicable.	0
Total Financial Viability (FV) [as applicable, ((a, b, c or d) + (e, f, g or h) + i)] Total may not be less than zero.		2

Opportunity Cost		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a	The highest risk rating has been chosen as the NPV from the most profitable alternative land use activity (annual crop agriculture) is expected to be at least 100% more than that associated with project activities. An NPV analysis is not required as the chosen risk rating is the highest and most conservative.	8
b-d)	Not applicable.	N/A
e-f)	Not applicable.	N/A
g)	The project proponent, Carbon Tanzania, is a non-profit organization.	-2
h)	The project is protected by a 30-year contract between Carbon Tanzania and Makame WMA to continue management practices that protect the credited carbon stocks over the length of the project crediting period. The contract was signed 27 April 2017 and is in effect through 26 April 2046. See supporting document "Makame Contract_English Final".	-2
i)	Not applicable.	N/A
Total Opportunity Cost (OC) [as applicable, (a, b, c, d, e or f) + (g or h)] Total may not be less than 0.		4

Project Longevity		
a)	Not applicable.	N/A
b)	The project has a 30-year legal agreement or requirement to continue the management practice. The project is protected by a 30-year contract between Carbon Tanzania and Makame WMA to continue management practices that protect the credited carbon stocks over the length of the project crediting period. The contract was signed 27 May 2017 and is in effect through 26 May 2046. See supporting document "Makame Contract_English Final".	15 = (30 – 30/2)

Total Project Longevity (PL) May not be less than zero	15
Total Internal Risks	
Total Internal Risks (PM + FV + OC + PL) Total may not be less than zero.	19

2 EXTERNAL RISKS

Land Tenure and Resource Access/Impacts		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a-b)	Makame WMA holds resource use rights on state-owned land.	2
c)	There are no known existing land tenure/ownership disputes. The project area is un-ambiguously state-owned.	0
d)	No known disputes exist over resource use in the project area. Resource use rights in the project area have been formally assigned to Makame WMA, and its five member villages, through the gazettelement of the WMA and registration of the WMA Authorized Association (in 2006).	0
e)	Not applicable.	N/A
f)	The project area is subject to a 30-year contract between Carbon Tanzania and Makame WMA to continue management practices that protect the credited carbon stocks over the length of the project crediting period. The contract was signed 27 May 2017 and is in effect through 26 May 2046. See supporting document "Makame Contract_English Final".	-2
g)	Not applicable. Importantly, the zoning designations and Village Land Use Plans established under the WMA resource management plan serve specifically to avoid and resolve any management conflicts. See accompanying document "Makame_RMZP"	N/A
Total Land Tenure (LT) [as applicable, ((a or b) + c + d + e + f)] Total may not be less than zero.		0

Community Engagement		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a)	Not applicable. There are no households living within the project area. The project area is designated for seasonal grazing, and the Makame WMA member villages, the closest established homesteads, are located outside of the immediate project area.	N/A
b)	More than 20 percent of households living within 20 km of the project boundary outside the project area, and who are reliant on the project area, have been consulted. This includes the five member villages of Makame WMA, who are active participants in the project activity and were consulted as part of the	0

	development of the WMA Resource Management Plan, and through their ongoing participation in the WMA Authorized Association.	
c)	The project generates net positive impacts on the social and economic well-being of local communities by providing direct revenue generation to member villages, financing for village-based rural development projects and direct employment in patrol and protection activities as Village Game Scouts.	-5
Total Community Engagement (CE) [where applicable, (a+b+c)] Total may be less than zero.		-5

Political Risk		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a)	-	
b)	The average governance score for Tanzania from 2011 through 2015 was -0.46, or between the governance score of -0.79 to less than -0.32. Details of the calculation are provided below and in "wgidataset_Tanzania current government indicators analysis.xls"	4
c)	-	
d)	-	
e)	-	
f)	Tanzania is engaged in the World Bank Forest Carbon Partnership Facility ¹ and is implementing REDD+ readiness activities.	-2
Total Political (PC) [as applicable ((a, b, c, d or e) + f)] Total may not be less than zero.		2

Political risk was evaluated using the latest World Bank index data.

Table 1. Calculation of Tanzania's average governance score.

Governance Indicator	2011	2012	2013	2014	2015
Control of Corruption	-0.14	-0.18	-0.21	-0.19	-0.21
Government Effectiveness	-0.05	0.02	-0.17	-0.57	-0.45
Political Stability and Absence of Violence/Terrorism	-0.63	-0.68	-0.70	-0.65	-0.60
Regulatory Quality	-0.40	-0.39	-0.32	-0.32	-0.36
Rule of Law	-0.54	-0.55	-0.50	-0.41	-0.43
Voice and Accountability	-0.62	-0.80	-0.81	-0.79	-0.72
Overall Mean	-0.40	-0.43	-0.45	-0.49	-0.46

Total External Risks

¹ <https://www.forestcarbonpartnership.org/tanzania>

Total External Risks (LT + CE + PC)	0
Total may not be less than zero.	

3 NATURAL RISKS

Fire	
Discussion/ Evidence	Low intensity fires are frequent in the region, and one of the most significant natural disturbances shaping the ecology of Acacia-Commiphora woodland. Current forest stocks in the project area reflect not the absence of fire but rather a history of recurring low intensity burns, which can be expected to continue and maintain the naturally sparse character, and low stocking, of this forest type. Quantitative data on fire return intervals are not available for the region. Kulindwa et al 2003² state that “wildfires are very rare” in the Makame area. Catastrophic burns that would produce substantial losses of carbon stocks are unlikely due to the low fuel loads and sparse tree cover. Grazing conducted in the project area by Maasai herders further reduces fuel loads. Fire risk is also mitigated in part by the large project area, which precludes potential for a burn extensive enough to affect a significant percentage of carbon stocks in the project area.
Significance	Catastrophic (70% or more loss of carbon stocks)
Likelihood	Once every 100 years or more
Score (LS)	0 ³
Mitigation	

Pest and Disease	
Discussion/ evidence	The Acacia-Commiphora woodland of the project area is diverse, with over 50 tree species, and is not known to be subject to catastrophic disturbance by insect pests or forest diseases. Forest pests and diseases as a source of risk are more relevant in temperate forests or plantations, with low species diversity and consequently susceptible to extensive damage due to pest and disease outbreaks, which tend to be concentrated on single host species. Further, there is no history of catastrophic forest disturbance due to forest pests or diseases in the region.

² Kulindwa et al 2003. Baseline Study For The Proposed Pilot Wildlife Management Areas (WMAs). Baseline Data and Analysis for Makami Pilot WMA. United Republic of Tanzania, Ministry of Natural Resources and Tourism Wildlife Division.

³ the VCS Non-Permanence Risk Tool v 4.0, if the likelihood is every 100 years or more, it shall be given a score of 0.

Significance	No loss.
Likelihood	Risk is not applicable to the project area.
Score (LS)	0
Mitigation	None

Extreme Weather	
Discussion/ Evidence	The most pervasive extreme weather event in the region is drought. While drought conditions occur frequently, mature trees constituting the bulk of existing carbon stocks are generally unaffected. Native tree species of Acacia-Commiphora woodland are adapted to survive annual dry seasons and drought conditions. Like fire, the potential risk of extreme weather events is mitigated by the large project area, making it unlikely that any weather event would affect a significant percentage of the carbon stocks in the project area.
Significance	No loss.
Likelihood	Less than every 10 years.
Score (LS)	0
Mitigation	None

Geologic Risk			
Discussion/ Evidence	Earthquakes are the most significant geologic risk in the area. However, because the project area is situated on relatively flat terrain (over 99% of the project area has slopes < 20%, see table below), potential damage to carbon stocks from earthquakes is negligible (i.e. landslides are not expected to occur in the area).		
	Slope	Hectares	%
	< 20%	100,384.2	99.21%
	>20%	799.3	0.79%
Significance	No loss		
Likelihood	Less than every 10 years.		
Score (LS)	0		
Mitigation	None		

Score for Each Natural Risk Applicable to the Project
(Determined by $LS \times M$)

Fire (F)	0
Pest and Disease Outbreaks (PD)	0
Extreme Weather (W)	0
Geological Risk (G)	0
Other natural risk (ON)	
Total Natural Risk (as applicable, F + PD + W + G + ON)	0

4 OVERALL NON-PERMANENCE RISK RATING AND BUFFER DETERMINATION

4.1 Overall Risk Rating

The overall risk rating calculated using the VCS AFOLU Non-Permanence Risk Tool is calculated below.

Risk category	Rating
Internal Risk	19
External Risk	0
Natural Risk	0
Overall Risk	19

The Makame Masailand Carbon Partnership Project will employ a non-permanence risk deduction of 19%, the minimum allowable risk deduction.

4.2 Calculation of Total VCU

Total VCUs including deductions to be deposited in the AFOLU pooled buffer account, are detailed in Section 3.2.4 of the Project Document.