

INTEGRATED SAFEGUARDS DATA SHEET CONCEPT STAGE

Report No.: ISDSC6288

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I. BASIC INFORMATION

A. Basic Project Data

Country:	Zambia	Project ID:	P144254
Project Name:	Zambia COMACO Landscape Management (P144254)		
Task Team Leader:	Indira Janaki Ekanayake		
Estimated Board Date:	10-Dec-2014		
Managing Unit:	AFTA3		
Sector(s):	Forestry (28%), General agriculture, fishing and forestry sector (35%), Agro-industry, marketing, and trade (24%), Animal production (13%)		
Theme(s):	Other environment and natural resources management (13%), Biodiversity (15%), Land administration and management (25%), Rural non-farm income generation (35%), Rural markets (12%)		
Financing (In USD Million)			
Total Project Cost:	1.33	Total Bank Financing:	0.00
Financing Gap:	0.00		
Financing Source		Amount	
Borrower		0.00	
Carbon Fund		1.33	
Total		1.33	
Environmental Category:	B - Partial Assessment		
Is this a Repeater project?	No		

B. Project Objectives

The project has the following objectives:

- (i) Agriculture Land Management/ Afforestation, Reforestation and Revegetation; To increase food production and farm-gate export income per unit area by expanding legume-based agroforestry systems with demonstrated higher sustainable crop yields, and important firewood, materials and

tradable carbon production compared to the baseline of traditional smallholder agriculture;

(ii) Energy Demand: To move household energy supply to a sustainable basis by promoting use of fast-growing coppicing leguminous trees in agroforestry systems, establishment of firewood woodlots and other plantings, control of destructive charcoal production in natural forests, and introduction of clean and efficient wood stoves to replace open fire cooking and use of charcoal;

(iii) Reduced Emissions from Deforestation and Degradation (REDD): To protect and expand areas under natural forest and conserve biodiversity through the intensification of food production on existing farm plots by adoption of legume-based agroforestry with in-built firewood fire wood production and avoidance of fallows, which will replace the need for further forest clearing as part of slash and burn agriculture, firewood and charcoal production.

C. Project Description

The COMACO Landscape Management project will increase smallholder farmer crop yield from sustainable climate-smart agriculture, increase farmer income and welfare, reduce uncontrolled forest loss and degradation and increase net forest cover of the Luangwa Valley while being supported by carbon revenues from a significant increase bio-carbon sequestration across the project area. The project comprises an array of specific interventions as part of an integrated landscape management strategy to conserve biodiversity, improve food production per unit area of cropland, and increase resilience to climate change in a landscape with a carefully designed, ecologically sensitive mosaic of production and conservation functions.

As a bio-carbon project, COMACO and its partners intend to pioneer a unique approach to the landscape-wide carbon asset management that combines several approved CDM and Verified Carbon Standard (VCS) methodologies under an umbrella of grouped projects, equivalent to CDM Program of Activities (PoA) to monitor, verify, and monetize carbon increments in the most biologically and economically important carbon pools across the management landscape. Conceptually, the project represents a bridge to a comprehensive landscape management methodology that would eventually achieve the same economic purpose of capturing for trade incremental carbon in a more economically efficient manner.

COMACO is dedicated to using economic incentives that promote small-holder adoption of improved farming and land use practices on landscapes sensitive to biodiversity loss and wildlife habitat/watershed degradation. The project area is approximately 1,219,888 hectares; 30,000 ha is for reforestation and improved cropland management, and 1,192,464 ha is for REDD.

The shift from expansive to intensive farming practices, coupled with the new availability of fuel resources, will help to alleviate the pressure on forest, reducing forest loss and supporting natural forest regeneration in conservation areas. Moreover, new management practices to be rewarded by COMACO will include cessation of post-harvest crop residue burning and collateral forest fire damage, the full suite of no-till and residue retention agriculture practices, dedicated woodlots and border plantings, and the switch to improved cook stoves using firewood from chopping agroforestry and conservation from traditional charcoal braziers to efficient wood stoves in the surrounding area. Supporting these efforts will be the promotion of incentives for sustainably harvested non-traditional forest products (apiaries for honey and wild mushrooms) as alternatives to destructive charcoal production, and the establishment of fire-breaks to protect forest products harvest.

The project will expand on the following technologies which have been piloted by COMACO in the project area:

(i) Conservation Farming: The project will expand on COMACO's current initiatives in

conservation farming. COMACO has been exploring and promoting techniques to increase yield and decrease the rate of deforestation and forest degradation from expansive low-yield agriculture in the face of the burgeoning population growth for the past ten years in the Luangwa Valley. These innovations cover the full range of conservation farming techniques from no-till to agro-forestry, which entails alley-cropping of maize between rows of actively coppiced agro-forestry species such as *Gliricidia sepium* (GS) and *Faidherbia albida* (FA). These are both nitrogen fixing and micronutrient cycling species which are also good for accumulating a humus layer in the alleys. Coppicing provides ideal firewood for modern efficient cook stoves and has resulted in the parallel 60,000 efficient cook stove project for COMACO farmers.

(ii) **Reduced Till Agriculture:** Compliance to low tillage practices is a major determinant of COMACO's incentive payment to farmers when purchasing their surplus crops. These practices include pot-holing of individual planting stations, provision of compost fertilizer in these pot-holes, and mulching of the area around the pot-holes with crop residues from the previous harvest. Through these practices farmers are able to produce maize yields above 2000kgs per hectare without fertilizer which in turn reduces associated carbon costs from increasing farmer dependency on fertilizer.

(iii) **Other Sustainable Agriculture:** Other measures to increase yield and recover degraded agricultural land include crop rotation with legumes and use of deep-rooted crops such as sunflower to help pull up soil nutrients, and fallow field recovery with velvet beans.

(iv) **Reduced Emissions from Deforestation and Degradation (REDD):** The project will scale up on existing initiatives that have resulted in a burgeoning honey market and potentially large wild mushrooms market with added premium pricing when producers demonstrate commitment to forest protection through the cessation of expansive slash-and-burn and rotational fallow agricultural practices. Small holder farmers will gain increased premium prices for their farm commodities when their community effectively implements a community-regulated and enforced land use zoning plan or establishes community conservation areas that exclude land use practices that are destructive to forests. The project will utilize one of the existing REDD methodologies approved under the Verified Carbon Standard.

(v) **Improved Fire Management:** Non-burning of post-harvest farm plots to promote mulching of next season's crop is an important part of a farmer's compliance score. No-burning of designated woodland sites used as apiaries is another basis for allocating points for compliance by participating farmers. Their respective points contribute to a community's overall scoring for market pricing of the commodities COMACO buys from small holder farmers. A comparison between a COMACO and a non-COMACO area using MODIS imagery data has shown a reduced fire history in the COMACO area and the importance of the measures applied by COMACO.

(vi) **Alternatives to fuel wood for forest protection:** Adoption of GS coppice agroforestry has the potential of becoming a large scale alternative for firewood, both to farmer household use and for sale to urban/peri-urban non-farm households. Coppicing results in annual stem regrowth of long narrow stems of 1-3inch diameter which grows during the dry season. This regrowth makes the stem easy to bundle, store and finally use for cooking. The firewood bundles are suitable for sale to current charcoal users and reduce forest degradation.

D. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The project will be implemented in the Luangwa Valley in Eastern Zambia. The Luangwa Valley is a mixed woodland landscape dotted with smallholder farms. The soils are depleted of nutrients due to monoculture crops planting by subsistence farmers, and the local practice of burning crop residues, which also contributes to soil erosion.

E. Borrowers Institutional Capacity for Safeguard Policies

COMACO has got in-house capacity for implementing safeguards for the project. The Ministry of Agriculture and Livestock (MAL) has a safeguards specialist who is familiar with World Bank safeguards procedures as they have been, and are currently implementing Bankfunded projects. From the borrower's side, the MAL safeguards specialist will be the main person responsible for ensuring compliance with safeguards issues in the project.

F. Environmental and Social Safeguards Specialists on the Team

Lungiswa Thandiwe Gxaba (AFTA2)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	As an agriculture land management / afforestation, reforestation and revegetation project, the proposed landscape project (also see project description) is expected to have both positive and negative impacts and therefore the Bank safeguards policy on Environmental assessment (OP/BP4.01) is triggered. Positive project impact on the environment will be large and significant. An Environmental and Social management Framework (ESMF) has been prepared to guide the screening and mitigation of any negative impact of the project.
Natural Habitats OP/BP 4.04	Yes	The Bank policy on Natural Habitats (OP/BP 4.04) is triggered by the project given the potential conversion of natural habitats either directly or indirectly, through both climate smart agriculture or REDD+ activities as proposed under this project. The expanded agricultural activities would largely be undertaken in the already degraded land areas and with the scaling up of project proposed technologies including soil conservation practices are expected to result in landscape improvements. The establishment of green zones in the participating chiefdoms would lead to a change in the natural habitats but the expected impact is positive. The expected changes in the livelihoods could have an impact on natural habitats and therefore the project

		ESMF includes proposed measures for mitigating such impacts.
Forests OP/BP 4.36	Yes	The safeguards policy OP/BP 4.36 on forests is triggered by this project as its activities will reduce uncontrolled forest loss and degradation and increase the net forest cover in the project areas within the Luangwa Valley. Project is largely expected to bring positive results under this policy through the demarcation and management of green zones in the valley. In addition to the expected potential positive benefits, the activities related to expected increase in small-holder farmer crop production and scaling up of sustainable climate-smart agriculture may have marginal negative effects on total forest cover and forest tree species and their distribution. The project ESMF includes proposed measures for potential mitigating of negative impacts.
Pest Management OP 4.09	Yes	The safeguards policy OP/BP4.09 on Pest management is triggered. Technology dissemination and scaling up on adoption of climate smart agricultural technologies to be supported by the project could result in the increased usage of agrochemicals by farmer beneficiaries, although the project does not directly advocate the use of pesticides or other chemical fertilizers while the use of organic and/ or conservation practices are encouraged. Given the potential risk of use of harmful chemicals (to man and environment), a Pest Management Plan (PMP) has been drafted by the project and is being currently reviewed by the Bank. Once approved the PMP will be adopted for use under the project.
Physical Cultural Resources OP/ BP 4.11	Yes	The Physical Cultural Resources safeguards policy OP/BP4.11 is triggered by the project to avoid potential threats that would negatively impact cultural resources related to the expansion of agricultural activities and REDD+ activities. Although such impacts could be small or negligible, given the landscape approach and the expected large total hectareage under this proposed project, the policy is triggered as a precautionary measure, and the project ESMF includes proposed measures for mitigating any negative impacts.

Indigenous Peoples OP/BP 4.10	No	The Bank policy OP/BP 4.10 (Indigenous peoples) is not triggered by this project as the project activities and target area in the Luangwa valley of the Eastern province does not include any indigenous people according to the policy definition. The project is however expected to have a significant positive effect on all rural households participating in the Luangwa valley area with the improved access to livelihood improvement through carbon credits generated by the project activities.
Involuntary Resettlement OP/BP 4.12	Yes	The Bank safeguards policy OP/BP4.12 (Involuntary Resettlement) is triggered. The project is not expected to involve any large scale land acquisitions or denial of access to normal means of livelihood across the target areas. However, in one of the targeted chiefdoms under the project it may involve some potential beneficiaries being resettled for green zone establishment. It may also include small-scale land acquisition, resident relocation and access limitation to some of the livelihoods. The project has already drafted the Resettlement Policy framework (RPF). The detailed social impact assessment (SIA) will be completed once the affected land and residents are identified and where these require resettlement, cause impact on assets, and / or negatively impact income, these mitigation procedures will be further defined, in detail ,in a Resettlement Action Plan (RAP) specific to that chiefdom.
Safety of Dams OP/BP 4.37	No	The Bank policy OP/BP4.37 on the safety of dams is not triggered as the project would not involve any construction of water retention structures in relation to the component 1 and 2 that would pose potential hazards to both human or animal health and safety. The project will not fund any large dams, as defined by OP 4.37 or or small dams.
Projects on International Waterways OP/BP 7.50	No	The Bank policy OP/BP7.50 (Projects on International Waterways) is not triggered by this project as the proposed project activities in relation to REDD+ and agriculture in the Luangwa watershed will not potentially impact any of the riparian countries of Zambia. Increased water use or direct abstraction from

		the project activities are not expected and as such are also not expected to negatively affect the Luangwa watershed.
Projects in Disputed Areas OP/BP 7.60	No	The Bank policy OP/BP7.60) (projects in Disputed Areas) is not triggered by the proposed Carbon finance project as the project area is not geographically located in any disputed territories of the country.

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 15-Feb-2014

B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing¹ should be specified in the PAD-stage ISDS:

Safeguards studies have been completed but will be updated once the actual targeted project area is completely delineated. Draft ESMF, RPF and PMP documents have been drafted by early October 2013 and are undergoing review.

IV. APPROVALS

Task Team Leader:	Name: Indira Janaki Ekanayake	
Approved By:		
Regional Safeguards Coordinator:	Name: Alexandra C. Bezeredi (RSA)	Date: 22-Apr-2014
Sector Manager:	Name: Tijan M. Sallah (SM)	Date: 22-Apr-2014

¹ Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.