

TERMS OF REFERENCE: CARBON FINANCING IN RANGELANDS

The World Initiative for Sustainable Pastoralism (WISP) is a project of the Global Environment Facility, co-funded by IFAD, implemented by UNDP and executed by IUCN, the International Union for Conservation of Nature. WISP is a global advocacy network of over 1000 pastoral institutions and experts that promotes understanding of sustainable pastoral development for both poverty reduction and conservation. The network is designed to enable pastoralists to demonstrate that their land use and production system are an efficient way of harnessing the natural resources of the world's rangelands. These Terms of Reference relate to a WISP study into Carbon Financing as a tool for sustainable rangelands management by pastoralists.

Background

Climate change is one of the most important challenges facing the planet in the 21st century. Without action to reverse the current effects of anthropogenic warming, global temperatures could reach 2°C higher than pre-industrial levels by 2035-2050 (Stern report). The impact of climate change on pastoralism has been discussed in the past (see for example "Change of Wind or Wind of Change? Climate change, adaptation and pastoralism": the World Initiative for Sustainable Pastoralism, 2007¹). The impact of pastoralism on climate change has received less attention, and the little attention that has been paid has focused on the emission of greenhouse gases as a result of livestock production, rather than the role that livestock production and livestock producers could play in mitigating climate change.

Mobile pastoralism is practiced on over a third of the Earth's land surface, by a population well in excess of 100 million people. Although long decried as a major contributor to environmental degradation, such accusations have been based on misapplied theories, missing evidence and failure to trace degradation to its root causes. The reality is that pastoralism has created and maintained rangeland biodiversity over many millennia, often replacing wild herbivores in grazing-dependent environments, while environmental degradation often stems from policies and investments that impede pastoralism and convert land to other uses.

The role of mobile pastoralism in sustainably managing grasslands is increasingly acknowledged and numerous countries now pay livestock keepers to maintain traditional transhumance practices in areas where pastoral landscapes are desirable and often lucrative (e.g. for tourism). The role of pastoralism in reversing desertification has been documented and agencies such as the UNCCD are gradually accepting that pastoralism is one of the most viable land use systems in the drylands. There is also a growing wealth of academic literature that dispels the myth of pastoralism as inherently destructive to the environment and shows the features of pastoralism that make it a valuable tool for conservation. In particular, the irrelevance of the Tragedy of the Commons to lands that are under communal management has been widely demonstrated, and the pre-eminent importance of mobility and customary governance has been explained and better understood at policy level.

If pastoralism can be good for rangeland environments, promoting biodiversity and protecting against desertification, then this raises the question of whether pastoralism also plays a role in both climate change adaptation and above and below-ground Carbon storage. Current discussions on the impact of livestock on climate change usually represent livestock in a bad light, since they focus on intensive livestock production and its emission of greenhouse gasses, and they overlook possible environmental services of extensive livestock systems. These services may come from grazing and browsing that promotes primary productivity in herbivore-dependent environments, they may come from the practices of livestock keepers who actively protect many trees and other plants of high use value, or who protect riparian resources from over-exploitation, or they may come from the protection of land from tillage that would release carbon to the atmosphere. Additionally, pastoral areas are an important opportunity for the development of new and appropriate technologies such as renewable energy sources.

Pastoralists may therefore be providing a global environmental service that is poorly understood and is not compensated, and which could be developed further. As a result of pastoral impoverishment in many regions, sustainable practices are coming under stress and less-sustainable practices are being adopted, often encouraged by policy and investment that is designed to constrain pastoralism. With appropriate payments, pastoralists may be enabled to implement their management system more effectively. If such payments are not made then there is a real risk that pastoralism will continue to be eroded, and its environmental services will be lost.

Carbon finance in the rangelands

Although the World's forests have received a lot of attention as potential sinks for Carbon, rangelands cover 1.5 times more of the globe than forests, and whilst some forests add only about 10% to their total weight each year, Savannas may reproduce up to 150% of their weight annually (Reid et al, 2008). Indeed, tropical savannas may have a greater potential to store carbon below ground than any other ecosystem (264 Gt C, IPCC 2000). The potential for pastoralism to contribute to rangeland soil carbon therefore deserves significant attention.

¹ http://www.iucn.org/wisp/documents_english/WISP_CCAP_final_en.pdf

Yet there is ambiguity over carbon finance in the rangelands, and formal payment systems have yet to be developed in most countries. The Chicago Climate Exchange² (CCX) in the USA is one practical and cost-effective solution that has been developed for rangelands carbon finance, although the system may currently lack precision. According to the CCX, contracts for agricultural carbon emission reductions through improved rangeland management are based on minimum duration of engagement for clear demonstrable additionality to either healthy or degraded rangelands. This may provide a model for other countries, although transaction costs may hamper payments to the small-scale and traditional systems that practice some of the most sustainable forms of pastoralism.

In the informal market, significant carbon payments are made to agricultural systems and there may be options for translating these into payments to pastoral systems. This is particularly relevant since the informal market is more likely to include add-ons to carbon finance: for example adjusting payment according to the social dimension of a given intervention. Biodiversity protection in many pastoral systems provides an add-on that is not currently captured by carbon markets, but debates about premium payments for these combined services are ongoing. The market failure that this gap represents may be bridged through systems such as organic labelling, which is being pursued in organic farming systems (e.g. UNCTAD/WTO), and which has been accomplished in a number of the world's pastoralist systems.

An important question for pastoralism (and other agricultural systems) is whether carbon payments can only be considered on the basis of additionality, or whether avoidance of Carbon emissions should be considered. For example, can pastoralists be compensated for not cutting down trees, or for not ploughing their soil? Can carbon emissions from livestock be considered as part of the carbon cycle and therefore part of the baseline against which emissions reduction or sequestration is compared? This study is an opportunity to pull together the latest understanding of this rapidly emerging field.

Broad aims of the study

This study will be based on a review of literature and online resources, along with interview of key informants, to capture the State of the Art knowledge on Carbon Financing as it applies to communal rangelands worldwide (recognising the value of trees and other resources as well as pasture in rangeland ecosystems). The study will serve as a baseline document on which WISP can develop future interventions, studies, advocacy messages and policy recommendations.

The study will examine the opportunities and constraints for Carbon Financing in the rangelands, existing mechanisms for carbon finance and challenges to applying them. The study will examine the different means of carbon sequestration in the rangelands (e.g. through improved pasture health, increased tree cover), means of reducing emissions (e.g. from fire, ploughing, tree felling), and other technologies and techniques that could provide options for pastoralists to benefit from carbon payments. The study will examine investment opportunities for carbon financing in the rangelands, the immediate prospects for carbon financing, potential options for the future, and the existing or likely constraints to each of these.

The study will identify key gaps in knowledge, policy and practice, and will make recommendations for WISP to engage in further research, advocacy and dialogue, in order to close those gaps. The study will also identify options for Carbon Financing that are currently available for development of projects, and will provide details of actors and agencies that are working in the field or implementing relevant projects. The following section provides more details about specific questions to be addressed in the study.

Key questions and issues for the study

- Background issues:
 - What is carbon financing? General information about climate change, soil carbon and carbon sequestration, reduction of emissions from rangeland degradation, other avenues through which pastoralists could secure carbon finance
 - What are the options for carbon finance in the rangelands? Categorise the type of projects and interventions with potential for carbon emission reduction and sequestration in the context of rangeland management, e.g. energy efficiency, renewable energy generation, carbon sequestration, emissions reduction. Which of these categories could relate to communal rangelands?
 - State of knowledge regarding the role of livestock in promoting soil carbon (with input from WISP), carbon sequestration potential of different rangeland ecosystems (perennial/annual grasslands, shrub lands, savannah, and steppe), trade-offs between grass and shrub dominated grasslands (e.g. does bush encroachment increase or decrease carbon sequestration?). Balancing the externalities e.g. between livestock emissions and carbon sequestration
- Opportunities and constraints for Carbon Financing in the rangelands:

² <http://www.chicagoclimatex.com/content.jsf?id=1101>

- What are the current options for carbon finance available to pastoralists (including rangeland-related payments and non-rangeland-specific options), and what options could potentially be made available in future? What actual markets exist? What is happening in the Compliance markets? What constraints do buyers have? What are the formal CDM markets, formal post CDM markets, and voluntary markets?
 - Is there a clear mechanism for measuring/monitoring soil carbon in the rangelands? Are there standards and monitoring mechanisms? What is the baseline? Are there clear payment mechanisms for soil carbon? Are payment mechanisms practical for communal rangelands and for developing countries? What is happening in "plant carbon" vs. "soil carbon" deals? Is there any value in joining plant and soil carbon together in a single deal? What is known, also, about grassland/plant carbon? What are the current standards already in grassland carbon on voluntary or compliance markets? Who created them? What types of grasslands and grazing management are they based on?
 - How are "deals" structured? What do buyers pay for? Who is selling what? Who takes the risk (what happens if the seller cannot verify the amount of CO₂ equivalents purchased?) How long are the deals? What barriers are created by long-term deals? What are "baseline" scenarios and what happens with "additionality"? Who plays what part in a transaction (seller, buyer, compliance manager etc.)? How large (in hectares, for example,) does an offer/purchase have to be to compete in the existing markets?
 - What deals are happening in the developing world now? Who is doing them? Would they be relevant for WISP? Examples of successful (and unsuccessful) carbon finance projects in rangelands. What projects has the UNFCCC (and others) accredited in the past? What is likely to happen in the future (e.g. REDD)?
 - What add-ons are currently possible related to Carbon Financing and what add-ons need to be considered for the future (e.g. EU subsidies for extensive rangeland management)?
 - What are the social and political constraints to carbon finance in the rangelands? What supporting national policy and legal frameworks already exist? What are the technical constraints (e.g. monitoring soil carbon, balancing emissions and capture)?
- Knowledge gaps
- Based on the opportunities and constraints, what needs to be done to enable pastoralists to benefit from payments for carbon sequestration?
 - What are the capacity issues at individual and community level?
 - What are the capacity, policy and legal issues at government and international level?
- Ways forward
- Suggested recommendations for policy and research
 - Suggested practical options and modalities for Carbon Financing for development projects
 - Carbon Funds currently available for development of projects. Details of actors and agencies that are working in the field or implementing relevant projects.

Implementation of the study

The study will be carried out over a period of approximately 15 days, starting during June 2008.

IUCN will pay the agreed consultancy fee but will not cover any expenses associated with this consultancy, unless agreed in advance in writing.

The consultant should make use of published literature and online resources as a priority, with interview of key informants if necessary.

Candidates short listed for interview will be expected to submit a draft work plan, including details of key resources they will access, key informants they wish to interview, and suggestions for improving the study.

The draft work plan will be elaborated into an annotated outline of the study (3-5 pages) by the selected consultant as part of the Terms of Reference for the study, and will be agreed with the coordinator as part of the contracting process. The draft report and the final report will be approved by the Global Coordinator.

Reporting/timeline

A draft report will be submitted in word format prior to completion of the study, for approval by the coordinator. The coordinator will provide feedback on this report after one week. The draft (and final) report should follow the outline detailed below and address the key questions detailed above. The pre-final report (i.e. the final report barring inclusion of any comments by peer

reviewers), accommodating the comments of the coordinator, must be submitted in word format, neatly formatted, properly referenced with a full bibliography, including details of all web resources.

The pre-final report should include an Executive Summary of no more than 4 pages, which should provide the main elements of the study (particularly recommendations) that will be used in the future development of policy notes. These policy notes are not the responsibility of the consultant.

The pre-final report will be shared by the coordinator with two or three peer reviewers, who will be given two weeks to provide comments. Those comments will be shared with the consultant, who should accommodate any final points in a definitive final version.

- Estimated starting date of consultancy: July 1st
- Estimated delivery date of draft report: August 1st
- Estimated delivery date of pre-final report: August 15^h
- Estimated delivery date of completion (with comments from peer reviewers): September 12^h
- The final tentative dates for this study will be confirmed at interview stage.

Report outline

1. Executive Summary
 - a. Capture the key issues and main recommendations from the study in no more than 4 pages
2. Introduction
 - a. Introduce the reason for the study (some of which will already be written in these terms of reference)
3. Background
 - a. What is carbon financing and why is it of relevance in the context of pastoralism?
 - b. Options for carbon finance in rangelands.
 - c. What are the issues (emissions vs. sequestration, types of rangeland environments, types of production system)
4. Opportunities and constraints for Carbon Financing in the rangelands
 - a. Options for carbon finance in the rangelands (actual and potential, formal and informal, above ground and below ground, reduction of emissions and increase of sequestration, etc.)
 - b. Measuring soil carbon and other forms of carbon storage and emissions reduction in the rangelands
 - c. Good and bad practices (related to the different options in 4a)
 - d. Technical constraints and opportunities to implementation of the options currently in existence
 - e. Social and political constraints and challenges
5. Knowledge gaps
 - a. Enable pastoralists to benefit from payments for carbon sequestration
 - b. Capacity constraints at individual, community, national and international level
6. Ways forward
 - a. Suggested recommendations for policy and research
 - b. Suggested practical options and modalities for Carbon Financing for development projects
7. Annexes
 - a. Bibliography
 - b. Carbon Funds currently available for development of projects
 - c. Actors and agencies that are working in the field or implementing relevant projects

Applications

Applications should be made by email to Florence.Njiriri@iucn.org, including a CV, a sample of published work and three recent referees.