Annex 5

The Sofala Community Carbon Project – Gorongosa National Park

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Envirotrade is a company based in the United Kingdom that joined with the European Commission, the University of Edinburgh and the Edinburgh Centre for Carbon Management to pilot a poverty alleviation model in the buffer zone of the Gorongosa National Park in central Mozambique. The buffer zone is not on park land, but is owned and managed by the communities around the park. The project is managed with technical support from the University of Edinburgh, using the Plan Vivo methodology for developing and managing community-based land-use projects with long-term carbon, livelihood and ecosystem benefits developed by the non-profit organization BioClimate Research and Development. Plan Vivo is a set of standards, processes and tools that is used to develop and register payments for projects in developing countries; it allows for income generation via carbon credits of land use, land-use change and forestry activities implemented by local farmers or communities.

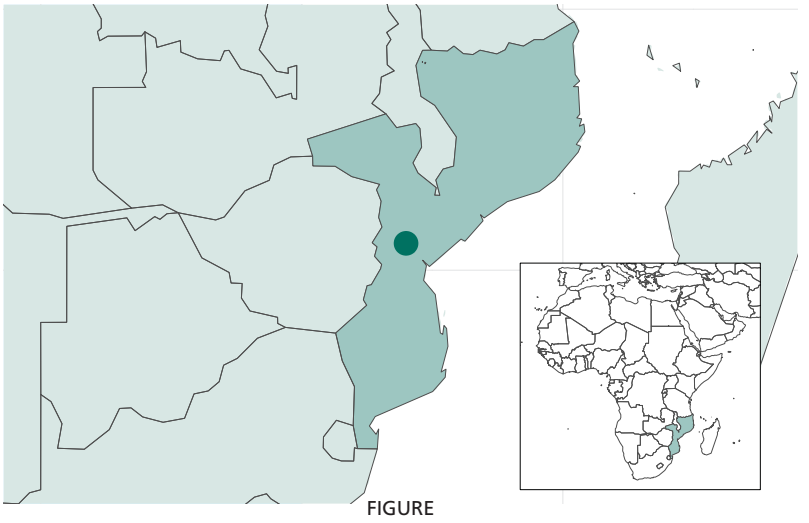

FIGURE
Location of the Sofala Community Carbon Project in central Mozambique.

A focus on land-use change in the buffer zone of the protected area has resulted in reduced pressure on threatened natural resources within the park. The project works closely with communities to rehabilitate the forests on their land and to introduce new, sustainable farming practices, such as agroforestry and the planting of nitrogen-fixing crops. These new practices have had a dramatic effect on the yields of cash crops such as cashews and fruits, and have begun to provide healthy livelihoods for close to 1 700 farmers. To date, the project has enabled the rehabilitation and management of approximately 10 000 hectares of community forest.

Verified Emission Reductions produced for sale to date is 1 106 044 tonnes of carbon dioxide equivalent (tCO^2e). Of this amount, 310 039 tCO^2e are from agroforestry (calculated *ex ante*) and 796 005 tCO^2e from forestry, resulting in revenues of over US$ 1 million. In order to maintain compliance and transparency, all carbon transactions have been conducted to Plan Vivo standards, with inspections and audits carried out by third parties. The trust fund is audited by a local auditor, and finances relating to the European Union (EU) involvement have been audited independently by the University of Edinburgh's auditors. Sales revenues from carbon credits are returned to the local community through payment for ecosystem services, inputs into the trust fund or generation of local employment. Additional funding was provided originally by the EU and by one of the company's founders for the project's start-up costs.

Fire management is a component of the project. Annual burning of the bush by communities was one of the significant threats to the forest resources in the project area. There appears to be a long history of burning by local inhabitants of the Miombo woodlands that dominate the buffer zones surrounding and adjacent to Gorongosa National Park. These woodlands are generally characterized by an open canopy with an understory of grasses, making this area a potentially fire-prone ecosystem. Communities in and around the park continue to use fire to achieve a number of objectives. These objectives include: the use of fire to reduce hazardous fuels that build up over the course of the growing season; traditional beekeeping; the herding of wild animals as a hunting tactic; and the burning of grass for improved grazing for domesticated animals, such as goats, and to attract game. Fire is most commonly used to clear semi-permanent farmland plots. These small plots, or *mashambas*, are generally between one and two hectares and are typically farmed for up to 15 years before being allowed to go fallow. The crop stubble in these plots is burned after each harvest in preparation for the planting of the next crop. The burning of stubble is an effective means of reducing insect infestation and providing short term soil nutrient inputs.

Fire is typically used by communities during the early part of the winter's dry season (April through June). Through generations of experience, the community members have determined that this time of year is safest for burning. Later in the winter (July through October), it is drier and there are more fuels available, increasing the likelihood of escaped fires. Early patchy burning is used to maximize ecosystem services, to avoid potentially destructive late-season fires and

to stimulate natural regeneration. Reforestation through natural regeneration is thereby promoted.

Incentives for responsible fire use by local community members include well-established and officially documented land ownership based on traditional tribal boundaries. As well, payments are made for carbon credits, with a set of indicators in place. If the indicators are breached, the result in carbon credits are not issued to the project.

Envirotrade has supported NRM Committees that develop and coordinate fire management training for local community members. The training includes the preparation of a prescribed-burning plan and readiness for fire-suppression activities in the project area. Locals often need very little fire management training because of their experience and comprehensive understanding of fire behaviour in the Miombo woodland ecosystem. Fire and its management are closely tied to the communities that have traditionally inhabited the landscape and therefore are considered in the project acivities. The fire management approach taken by the project includes fire-awareness education and training for project personnel, community members and firefighters; and providing fire-fighting equipment. In particular, fire education is recognized as being an effective way to increase the involvement of community members in fire management planning, plan implementation and awareness-raising of existing fire-related laws and policies. Prefire season training is required every year for those groups directly involved in fire management activities. Individuals are selected from the among the project workforce and community land managers to receive more advanced fire training, in addition to the annual prefire season training.

The forest management plan includes a detailed fire management component. The plan was developed along with input from members of two communities (Chicale and Mucombeze) located within the Gorongosa project site. The plan, developed through participatory approaches, is based on local needs and capabilities. To underpin effective fire management within the project sites, several studies have been conducted on the impact of fire on the Miombo woodlands that dominate the park buffer zones.

For more information, see www.envirotrade.co.uk.

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A review

This publication is based on the experiences of FAO and partners in community-based fire management (CBFiM). The concept of CBFiM emphasizes the importance of local communities in policy development and fire management practices.

Several case studies from Australia, Mexico and the United States of America highlight the importance of community access to land and natural resources, particularly in relation to fire-management decision-making. The publication emphasizes the need to include CBFiM in the planning and implementation of projects for Reducing Emissions from Deforestation and Forest Degradation (REDD). A case study from Mozambique shows how CBFiM can generate income via carbon credits.

The publication defines current limiting factors of implementation while underlining the importance of effective partnerships within and outside the communities. It concludes with a call to continue the development of tools and resources to assist CBFiM practitioners with their implementation of CBFiM.

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