

MADAGASCAR

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IMPACT EVALUATION MIDLINE REPORT FOR FP026 - SUSTAINABLE LANDSCAPES FOR EASTERN MADAGASCAR

CONTEXT

The Sustainable Landscapes in Eastern Madagascar (SLEM) project aims to increase the resilience of smallholder farmers and reduce carbon emissions by implementing climate-smart agriculture and more sustainable forest management in two protected areas, the Ankeniheny-Zahamena Forest Corridor (CAZ) and the Ambositra-Vondrozo Forest Corridor (COFAV). These two corridors are the remaining large blocks of forest in eastern Madagascar, with 660,000ha covering 15 districts. This USD 18.5 million project, started in 2018, is funded by the Green Climate Fund (GCF) and implemented by Conservation International Madagascar.

PURPOSE AND OBJECTIVES

This brief summarizes the intermediate outcomes observed in our midline impact evaluation which suggests a positive trajectory towards achieving medium-term and longer-term objectives. The impact evaluation midline report has been completed with Conservation International and the Centre for Evaluation and Development.

SCOPE

The SLEM project addresses one of the core causes of severe deforestation and land erosion in recent decades, namely unsustainable land-use practices. The project aims to raise awareness of climate-related risks and climate-smart agricultural practices through various activities. It provides training and inputs to encourage people to adopt practices that prevent land and forest degradation while improving smallholder farmers' resilience and food security. The project also seeks to strengthen the capacities of community-based organizations, by providing training, stipends and equipment to conduct forest patrolling activities and demarcate the limits of the protected areas.

METHODS

The midline impact evaluation was conducted as part of the project's participation in the Learning-Oriented Real-Time Impact Assessment (LORTA) program of the GCF's Independent Evaluation Unit. The evaluation follows an experimental approach relying on the randomization of the



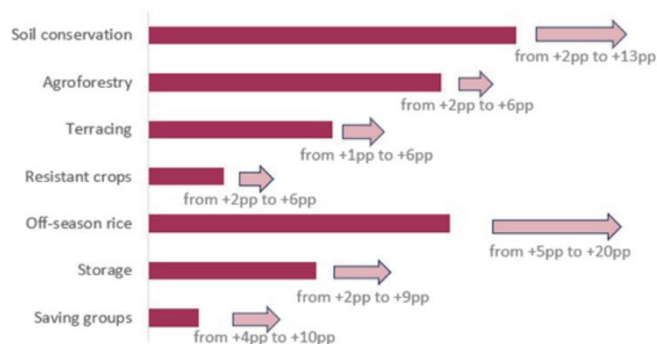
Forest in eastern Madagascar,
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order in which each beneficiary group receives project activities. Early beneficiaries (households that received project interventions from 2019) are compared against late beneficiaries (households that received project interventions from late 2022). Baseline data was collected in early 2019 from 1,822 households from local community associations. More than 90% of these households (1,654) were interviewed again for the midline in late 2022. An endline impact evaluation is planned for late 2024. SLEM midline estimates measure the impacts of belonging to early beneficiary groups (intention-to-treat effects), irrespective of the actual reception of SLEM interventions. We also estimate the project's impacts on actual beneficiaries (specifically, local average treatment effects). Furthermore, we use panel data to conduct Difference-in-Differences estimates. As a result, the midline estimates detailed below offer a range of impacts based on these different analytical approaches.

RESULTS

Midline results show significant improvements in households' short-term outcomes, with widespread adoption of the following conservation agriculture practices, as illustrated in figure 1 below. Here, the bars illustrate the level of adoption by early beneficiaries (our treatment group). The arrows indicate the increase in adoption resulting from the SLEM project, expressed in percentage points.

Figure 1. Midline impacts on the adoption of conservation agriculture practices¹



Source: LORTA team
Note: Figure 1 is illustrative and not to scale.

In addition to these short-term outcomes, there are early signs of changes in longer-term outcomes. Most importantly, the midline evaluation showed an improvement in food security status for treatment households as measured by the Consolidated Approach for Reporting Indicators of Food Security index (of 5 to 17 decimal points, significant at 5 and 10 per cent levels).²

The midline evaluation also highlights a reduction in households' reliance on forest resources, with a lower proportion of early beneficiaries deriving income from environmentally unsustainable activities to the tune of 1 to 3 percentage points in the summer and 4 to 7 percentage points in the winter.

When assessing impacts by gender, the midline estimates highlighted that:

- Women-headed households drive adoption of soil conservation practices and terracing.
- Households headed by men drive adoption of drought-resistant crops, off-season rice, pest management practices, saving groups.

Important differences are also observed between CAZ and COFAV, with households in CAZ driving the adoption of conservation agriculture practices.

The project's longer-term impacts will be measured in an endline impact evaluation planned for 2024.

¹ The significance levels for the individual conservation agriculture practices are as follows:

- Soil conservation (2 to 13 percentage points at the 1 per cent level)
- Agroforestry (2 to 6 percentage points at 1 per cent level, for 5 out of 6 sets of estimates)
- Terracing (1 to 6 percentage points at 1 per cent level)
- Resistant crops (2 to 6 percentage points at the 1 per cent level)
- Off-season rice (5 to 20 percentage points at the 1 per cent level)
- Storage (2 to 9 percentage points at the 1 per cent level)
- Savings groups (4 to 10 percentage points at the 1 per cent level)

We also find a reduction in the proportion of households practising pest management strategies (7 to 10 percentage points at the 1 per cent level). Multi-cropping, irrigation and the number of conservation agriculture practices do not show consistent levels of significance.

² The CARI index ranges from 1.00 (food secure) to 4.00 (severely food insecure).

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