



Africa RISING Global Climate Change Mitigation (Zambia)

This project began on 1 April 2014. It is a one year study to (i) provide an evidence base for the links between field and farm-scale sustainable intensification (SI) interventions and climate change mitigation and biodiversity conservation in Zambia; and (ii) provide recommendations to inform the design of integrated programs involving agriculture and environmental conservation for USAID programming in Zambia and other regions.

Key achievements (01 April 2014 - 30 September 2014)

- i. Review of literature on agricultural-environmental linkages and an inventory of relevant datasets in Zambia. For purposes of this project, the linkages of interest include the impacts of sustainable intensification interventions and climate change mitigation and biodiversity conservation. Sustainable intensification is defined as a practical pathway towards the goal of producing more food with less impact on the environment – intensifying food production while ensuring the natural resource base on which agriculture depends is sustained, and improved for future generations, with a focus on conservation agriculture and agroforestry.
- ii. The project team held introductory meetings with partners and stakeholders in Mfuwe (13 May) and Lusaka (15 May). The purpose of those meetings was to introduce the project objectives to participants and to develop causal loop diagrams representing the assumptions about agricultural-environmental linkages. There were a total of about 40 participants from partner and stakeholder organizations.
- iii. Development of a system dynamics model that represents the linkages between on-farm decisions about agricultural practices and landscape-level impacts on forests and biodiversity. The model is based upon parameters and variables from published literature and existing datasets, along with causal loop diagrams developed by project partners and stakeholder organizations in Zambia in introductory meetings and in a participatory system dynamics modeling workshop. The model will be used to examine linkages between field and farm-scale sustainable intensification (SI) interventions and climate change mitigation and biodiversity conservation in Zambia.
- iv. The project team held a participatory system dynamics modeling workshop in Chisamba (13-14 August) with the aforementioned partners and stakeholders to introduce the model and get participant feedback on its structure, assumptions, and sources of data.

- v. A shareable bibliographic library has been developed using Zotero. The library includes literature on topics such as: agroforestry, biodiversity conservation, climate change mitigation, conservation agriculture, deforestation, food security, gender, livelihoods, sustainable intensification, and wildlife.