

## 42. Towards a scalable framework for evaluating and prioritizing climate-smart agriculture practices and programs

Corner-Dolloff Caitlin<sup>1</sup>, Jarvis Andrew<sup>1,2</sup>, Loboguerrero Ana Maria<sup>2</sup>, Lizarazo Miguel<sup>2</sup>, Nowak Andreea<sup>1</sup>, Andrieu Nadine<sup>1,3</sup>, Howland Fanny<sup>1</sup>, Smith Cathy<sup>4</sup>, Maldonado Jorge<sup>5</sup>, Gomez John<sup>5</sup>, Rosenstock Todd S.<sup>6</sup>, Girvetz Evan H.<sup>1</sup>

<sup>1</sup>*International Center for Tropical Agriculture (CIAT), Decision and Policy Analysis, Cali, Colombia*

<sup>2</sup>*CGIAR research program on Climate Change, Agriculture, and Food Security (CCAFS), Cali, Colombia*

<sup>3</sup>*Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), L'Unité Mixte de Recherche Innovation et Développement dans l'Agriculture et l'Agroalimentaire, Montpellier, France*

<sup>4</sup>*Twin Oaks Research, 16640, Flinton, PA, USA*

<sup>5</sup>*Universidad de los Andes, Bogotá, Colombia*

<sup>6</sup>*World Agroforestry Center (ICRAF), Nairobi, Kenya*

Governments, donors, and non-governmental organizations are recognizing the need to integrate climate change and agriculture development goals in planning. Incorporating the climate-smart agriculture (CSA) concept can strengthen integration by explicitly emphasizing tradeoffs between investment options. Given the complex relationships between the food security, adaption, and mitigation goals of CSA, decision-support frameworks are needed that integrate stakeholder priorities, draw on the best scientific evidence available, and present complex results simply. Here we present a four phase stakeholder-driven framework for prioritizing CSA investment, designed to be globally applicable, for various users, for use from regional to sub-national levels, and adjustable given data and resource constraints. In the first phase, the scope and next-users of CSA portfolios are clarified, relevant practices are identified, and roughly ten indicators are selected/adapted from a suggested set of 29, based on scientific literature, to evaluate practices against CSA outcomes. A participatory workshop is used in phase 2 to short-list practices based on the results of the indicator evaluation and additional stakeholder criteria. A cost-benefit analysis is then conducted (phase 3) on these priority practices. In phase 4, stakeholders are reconvened to develop CSA investment portfolios that minimize trade-offs, maximize benefits and synergies, and address end user priorities. Barriers to adoption of practices and pathways to overcome these are used to adjust priorities or implementation plans. We present lessons learned from Guatemala and Mali, which demonstrate the scalability of the process, modifications based on institutional contexts, and strategies for refining the framework for use in Africa and Asia in 2015 with users including national agriculture ministries, agriculture development alliances, and bilateral and multilateral donors.

This research was principally funded by CCAFS.