

INTRODUCTION

Challenges to agriculture in Guatemala's Dry Corridor

- Extreme weather events
 - Prolonged droughts
 - Erratic rainfall
 - Frost
 - Land degradation
 - Water scarcity
 - Poor land management
- 300,000** households affected (18.7% total national population) [1]
- 55-100%** maize and bean yield losses [2]

Response:

The Ministry of Agriculture, Livestock, and Food (MAGA) is providing farmers with incentives to adopt climate-smart agriculture (CSA) that aims to increase:

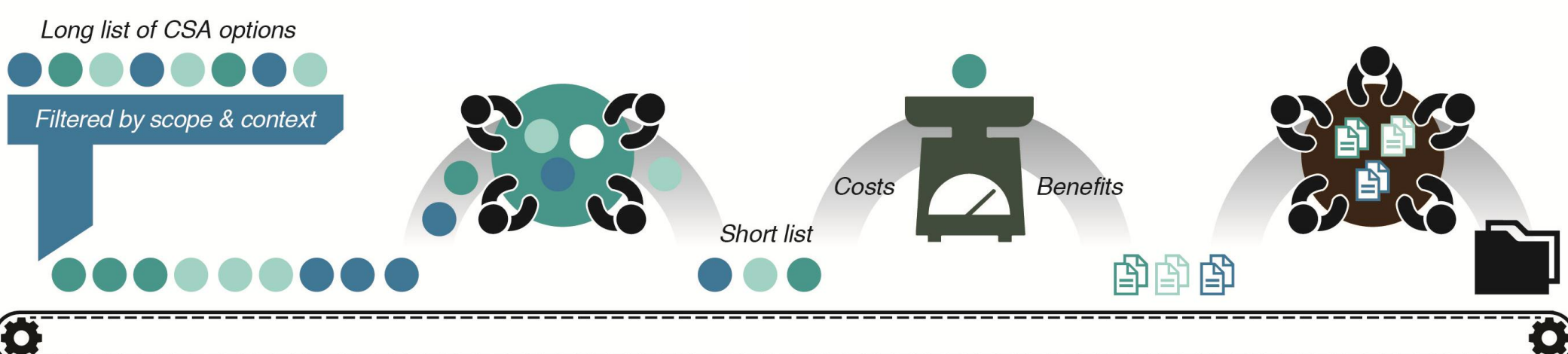
Productivity Resilience Low-emissions development

MAGA, CCAFS, and CIAT partnered to develop and test a CSA Prioritization Framework to support decision-makers in identifying best-bet **CSA investment portfolios**. MAGA is using the results to revise the government plan for landscape transformation in the Dry Corridor ('Del corredor seco al corredor de oportunidades,' 2014).

Research questions

- > How do policy and stakeholder investment priorities align with local realities?
- > What adoption gaps exist for priority CSA practices?
- > What strategies can be used to take CSA practices and services to scale?

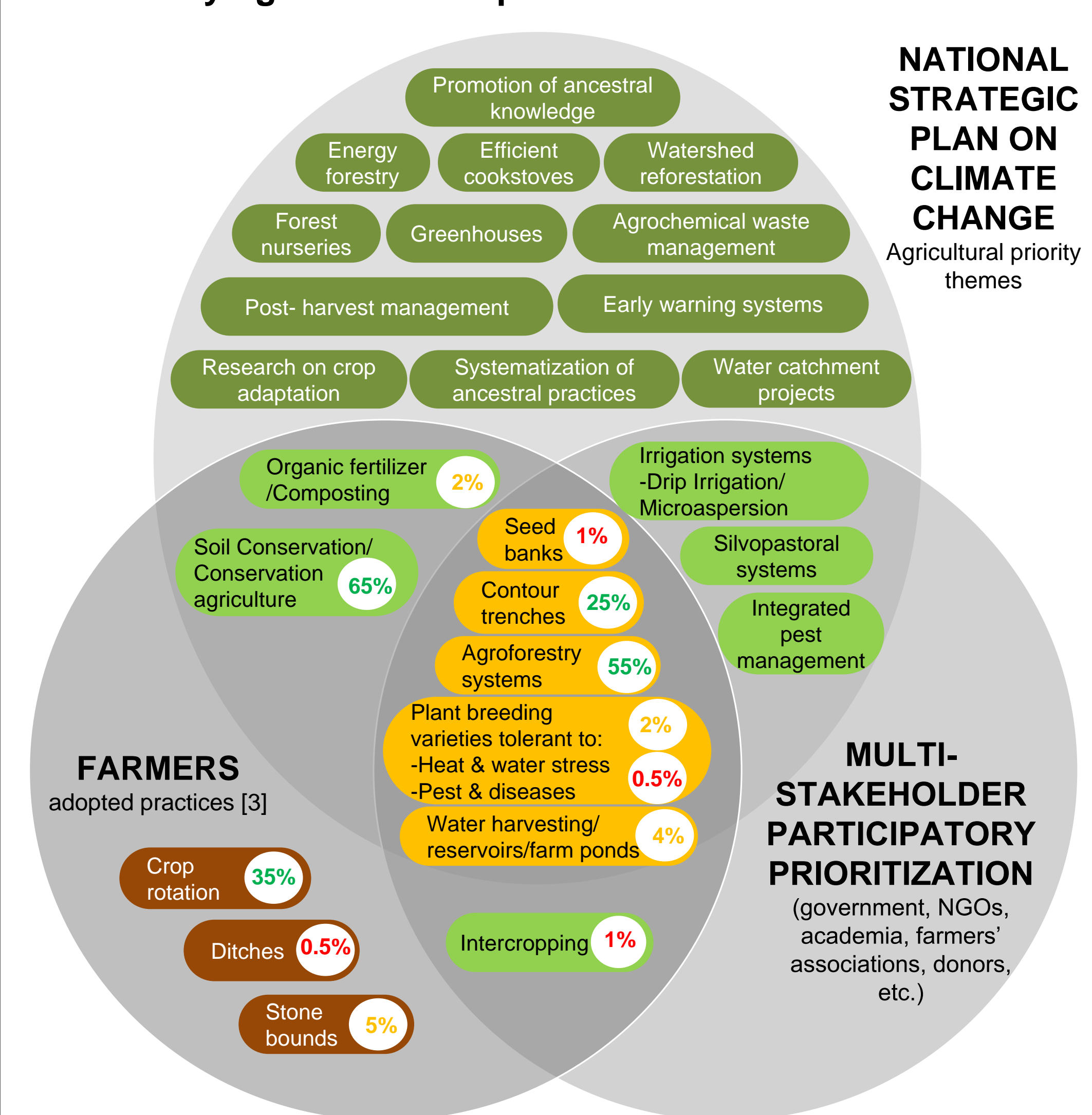
CSA Prioritization Framework



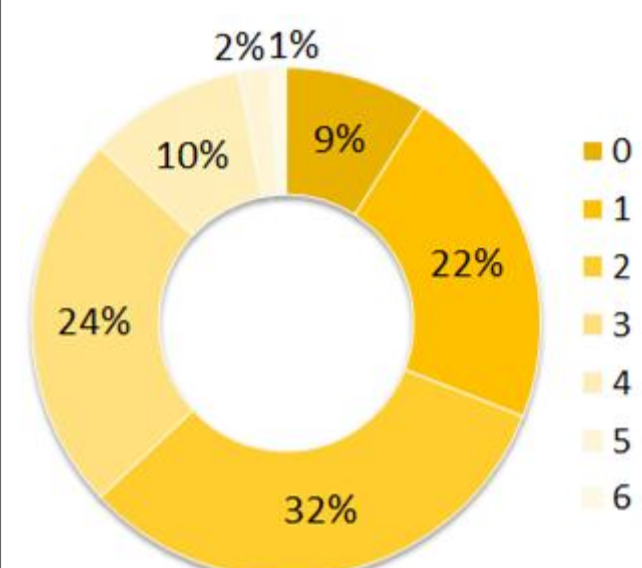
- Results**
 - Evaluation of practices and services based on **indicators**
 - Ranked **long list** of CSA practices for context
- Results**
 - Stakeholder prioritized **short list** of top CSA practices and services
- Results**
 - Analysis / valuation of short list of top options
 - Ranked short list of practices based on **economic analysis**
- Results**
 - Stakeholder determined **CSA investment portfolios**
 - Adoption opportunities and constraints
 - Implementation strategy

PRELIMINARY FINDINGS

Identifying stakeholder priorities for CSA investments



On-farm CSA Implementation



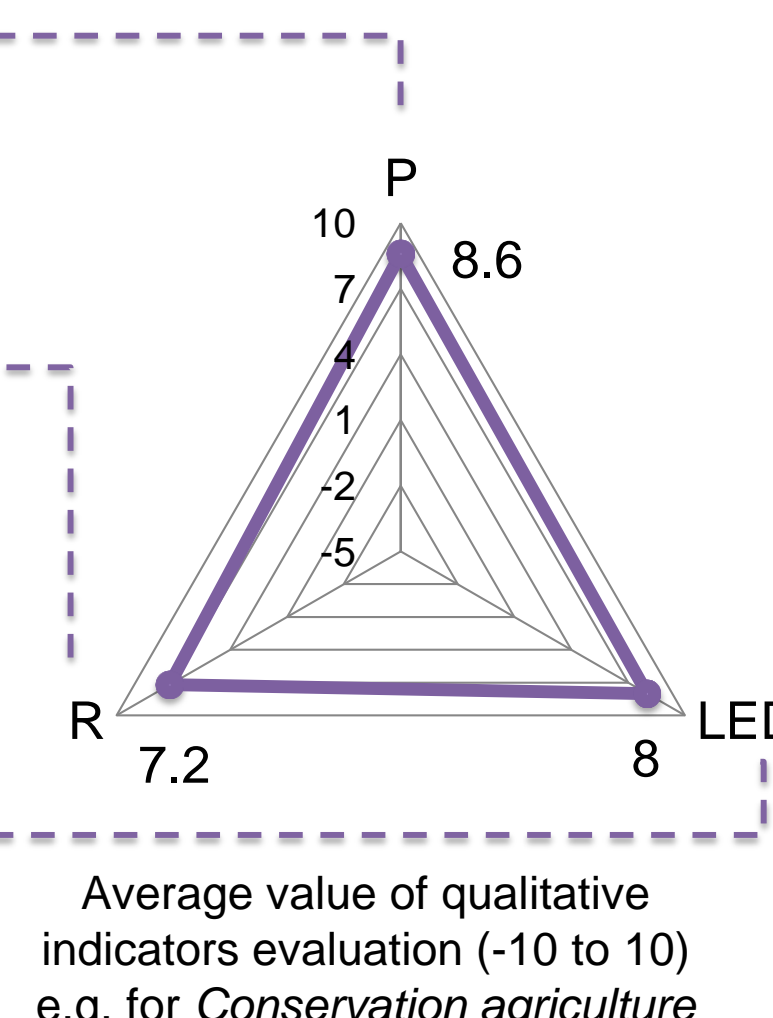
Percentage of farmers (%) implementing 0 to 6 CSA practices in the Dry Corridor

CSA Evaluation

Indicators

- Productivity (P)**
 - Yield
 - Labor
 - Variability
 - Income
- Resilience (R)**
 - Food access
 - Gender: Labor, income
 - Efficient use of: Water, fertilizers, other inputs
 - Biodiversity
 - Erosion
 - Soil quality
- Low-emissions development (LED)**
 - Emissions intensity

CSA goal assessment



HIGHLIGHTS

Farmers generally implement practices promoted as national CSA priorities, but these do not always have the highest adoption rates.

- Drought related CSA practices (**water reservoirs, heat and water-stress resistant crop varieties**) are priorities to policy makers and funders, yet many farmers face technical and financial barriers to adoption.

Financial and non-financial incentives, such as technical assistance, investments in infrastructure and/or food aid, were received by roughly 64% of farmers in the region. Food aid is used to incentivize adoption of two or more CSA practices by household per season.

Promising practices and services with low adoption rates are potential priorities for targeting incentives as part of national agricultural and climate change strategies.

More than **50% of farmers implement two to three practices** simultaneously, indicating that CSA investments need to refer to **technological packages**, rather than isolated solutions.

CSA policies should promote **both practices and services**, such as financial services (crop insurances, subsidies, credits, etc.) and strategies for knowledge sharing and management (extension services, early warning system, etc.).

Multi-level and cross-sector decision-making processes are needed to identify, assess, and prioritize **context appropriate** CSA initiatives to effectively scale out CSA to targeted farming communities.

We thank Andy Jarvis^{1,2}, Ana Maria Loboguerrero², Deissy Martinez², Fanny Howland¹, Nadine Andrieu¹, and Barbara Oliveira² for support in the implementation of the project in Guatemala. We also acknowledge the financial and technical support of CCAFS to design and pilot the process.

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[1] FAO/WFP. 2010. Crop and food security assessment mission to Guatemala. Special report. [2] Accion Contra el Hambre (ACF). 2010. Situación Alimentaria y Nutricional en el Corredor Seco de Centroamérica. ACF. [3] Percentages refer to the farmers living in the Dry Corridor adopting the specific practice from a sample of 200. The sampling methodology takes into account both farmers who implement CSA practices and the ones who don't. The percentages sum more than 100%, since each farmer implements 0 to 6 practices.