



# Farmer Participation in a Climate Smart Future

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# Acknowledgements

- Farmers of Bumula, Malakisi, Sirisia, Wangai, Kombewa, and Madinay
- Vi-Agroforestry staff in Kisumu, Kitale, and Nairobi
- World Agroforestry Centre staff
- Colorado College Environmental Program





# Roadmap

Farmers & Carbon Markets

Case Study in Kenya

Looking to the Future



# Climate Change and Smallholder Farmers



Climate change mitigation measures need to include smallholder farmers—but cannot compromise livelihoods



Smallholder farmers manage 70% of cropland



Deforestation: 17% of GHG



# Pro-Poor Carbon Market

## Buyers

Performance-based standards and certifications

Carbon market projects may be a feasible solution to mitigate climate change and achieve sustainable development

## Farmers

Carbon sequestration activities



Tree Plantations  
(500-26,000ha)



Sustainable Agricultural Land  
Management (0.5-10 ha)



Agroforestry Projects  
(>1 ha)





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# Kenya Agricultural Carbon Project (KACP)

World Bank BioCarbon Fund

Verified Carbon Standard: Soil Carbon Methodology

3.29 USD/ha/year



1.37 tons CO<sub>2</sub>e/ha/yr

Smallholder Farmers

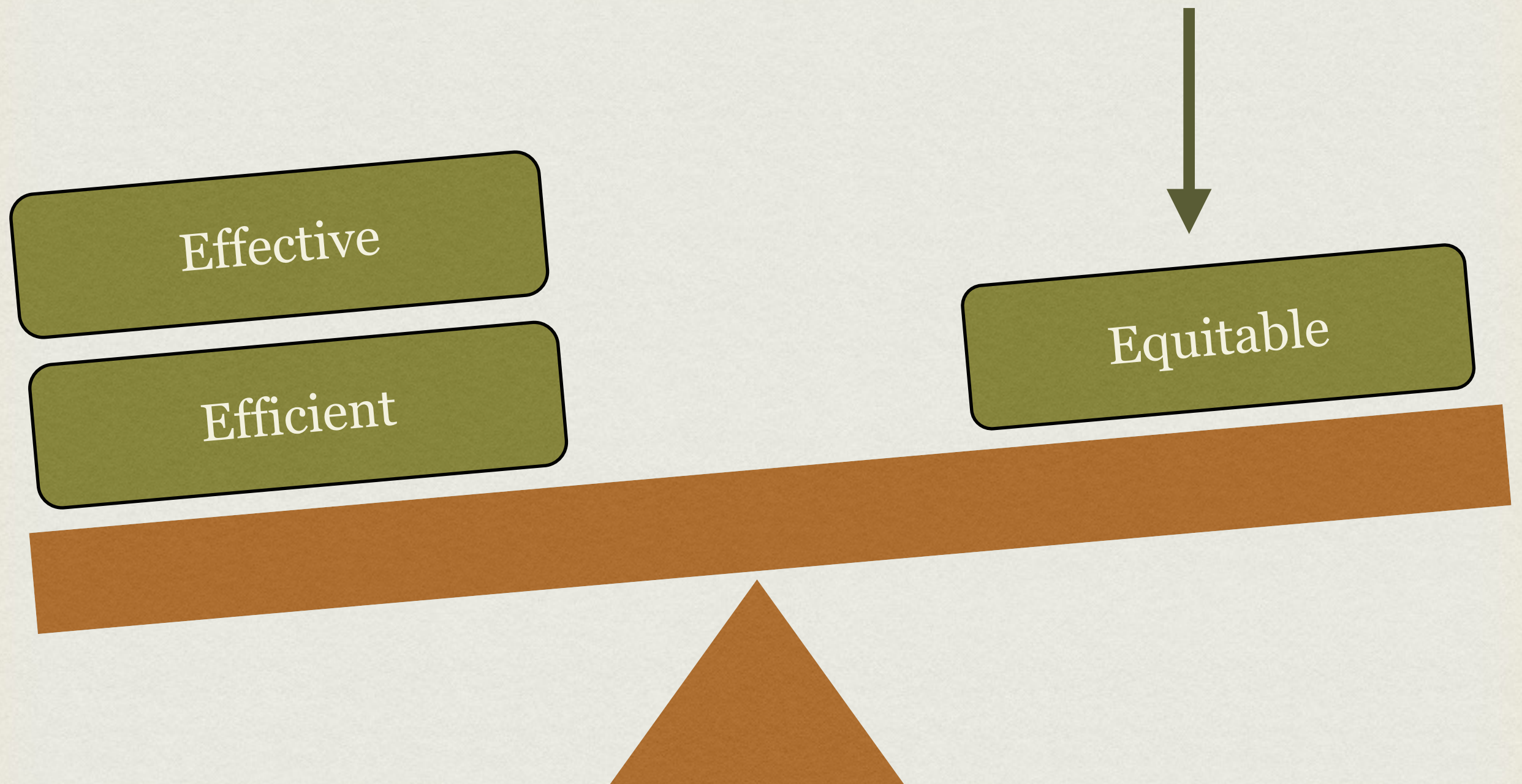
45,000 ha of land, 65,800 farmers carbon







# Pro-Poor Project Challenges





# Equity in Access: Participation

- **Eligibility**
- **Willingness**
- **Ability**



Brown and Corbera, 2003;  
Pagiola, 2005



# Eligibility to Participate

- Biophysical conditions
  - Decreased soil fertility, low crop production
- Political interests
  - Support and funding from SIDA, World Bank BioCF, Vi Agroforestry





# Willingness to Participate

- **Negative influencing factors**
  - Perception of risk (60%)
  - Evaluative frame of reference
- **Positive influencing factors**
  - Livelihood improvement: VSLAs (80%)
  - Trust in project developer (45%)





# Ability to Participate

- Land tenure and size were not barriers
- Adopted at least one practice (88%)
- Time and labor are barriers to terracing and composting (66%)
- Village Savings and Loans Associations increased farmers' financial and social capital (80%)





# Equity in Access: Participation

## Eligibility

- ❖ Cooperation and partnership between buyer, project developer, and farmers
- ❖ Outside sources of funding

## Willingness

- ❖ Additional benefits outside the scope of the carbon market project
- ❖ Trust in project developer

## Ability

- ❖ Diverse carbon accounting options and supplemental programs



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# Farmer Participation for a Climate-smart Future

- Multi-level collaboration
- Identifying farmer perceptions



**Vi Agroforestry**

