Farming Adaptation Strategies for Climate Change: A Case Study of Campesinos in the Piedras River Watershed, Colombia
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Introduction
Climate Change is expected to pose two distinct sets of challenges for poor rural households:
1. The first challenge is the increasing frequency and severity of weather shocks, which will leave rural households unable to create or maintain resilient agricultural production.
2. Second, are the challenges related to long-term shifts in temperature, rainfall patterns, water availability, and other environmental factors, which will affect food security and resilient agricultural production. (Baez et al, 2013).

Even though climate change is beginning to be recognized as a global threat, the focus has been mainly on scientific and economic solutions. This has often excluded human and gender dimensions (Aboud, 2011). Women account for a high proportion of farmers in many developing countries yet often have very little access to the resources they need to support their livelihoods, including land, livestock, technology, farm labor, extension services, financial services and education.

Objective
The objective of this study was to identify crops that are vulnerable or resilient/resistant to climate change and how these changes will impact farmer livelihoods. We investigated if climate change perceptions differ by gender and if there are gender specific vulnerabilities to climate change. This included mapping the household farming system.

Methodology
- Household Interviews
- Ethnographic Research
- Capacity and Vulnerability Analysis
- Farm Mapping
- Seasonal Calendar

Results
<table>
<thead>
<tr>
<th>Percentage of members of ASOCAMPO using CSA practices (n=36)</th>
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<tbody>
<tr>
<td>Compost, Organic Fertilizer</td>
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<td>Pasture Land Rotation</td>
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<tr>
<td>Reincorporating Native/ Natural seed Varieties</td>
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<td>Manure Management</td>
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<td>Water Storage</td>
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<td>Integrated Pest Management</td>
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<td>Silvopastoral Systems</td>
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<tr>
<td>Crop Residue</td>
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<td>Improving Livestock Breeds</td>
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<td>Crop Rotation</td>
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<tr>
<td>Tree Barriers</td>
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<tr>
<td>Associated/ Integrated Cropping</td>
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<tr>
<td>Green House</td>
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<tr>
<td>Improved Forage</td>
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<tr>
<td>Irrigation</td>
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<tr>
<td>Growing Crops incrementally</td>
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Adaptation Measures and Practices Divided by the Roles of the Family.

Men
- Land preparation
- Maintenance of fences
- Planting and processing of cabuya
- Rotating the grazing pastures
- Management of cattle

Entire Family
- Conservation areas
- Reforestation
- Milking
- Compost
- Planting and harvesting of crops
- Management of trout

Women
- Management of small livestock
- Growing vegetables
- Conservation of crop seeds
- Selling in the market
- Creating organic pesticides

Background
The Piedras River watershed includes different agro-climatic zones related to elevation with a population of around 3,000 people. The Piedras River watershed is under the jurisdiction of the Popayán municipality. Crop and livestock specialization varies according to elevation. ASOCAMPO is the main organization for campesinos. They are the driving force helping the small-holders adopt CSA strategies.

Conclusion
Farmers who are members of ASOCAMPO are taking proactive measures in the Piedras River watershed to adapt farming strategies to climate change, largely at the initiative of the organization. Both male and female households have adapted multiple climate smart agriculture practices. Women also play a significant role in HH food security. They are in charge of the HH garden which provides 80-90% of their vegetable/ fruit consumption.

Although the farmers know of climate change and stated noticeable observations, they refer to it as climate variability within the region.

References

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