Using Qualitative GIS to Explore Gendered Dimensions for CAPS in the Philippines: A Mixed Methods Approach

Mary Harman* - Virginia Tech
Maria Elisa Christie - Virginia Tech
Isidra Bagares - ICRAF
Agustin Mercado - ICRAF
Victor Ella - University of the Philippines-Los Banos
Manuel Reyes - North Carolina A&T
Why Gender, CAPS, and the Philippines?

- Food insecurity and poverty rates
  - Degraded landscapes
  - Unsustainable agricultural practices

- CAPS can affect men’s and women’s time, resources, and labor

- “Development efforts in the Philippines, have either neglected to include women or increased their workload.” (Sobritchea 2005).
Introduction

• Conservation Agriculture Production Systems (CAPS)
  – Minimum tillage
  – Year-round crop cover
  – Diverse crop rotations

• Gender Dimensions

• Mixed method approach
  – Participatory & geospatial
Objectives

• Identify gender-based constraints and opportunities that are relevant to CAPS.
Research Questions

• Do men and women have different soil knowledge, access to resources, and agricultural practices?

• If so, how can the combination of participatory methods and geospatial techniques serve to document these in relation to CAPS?
Site Description

Claveria, Misamis Oriental, Mindanao, Philippines
Research Methods

- Focus group discussions
- Household interviews
- Field visits
- Participant observation
- GPS mapping of community resources, households, and fields
- Soil sampling
- Farmer restitution
Focus Group Discussions

Rizal: 8 men, 15 women
Patroacenio: 6 men, 11 women

- Soil sample discussion
- Practices and participation
- Timeline activity
- Mapped community soils on satellite imagery
  - Name of soil
  - Description
  - Category
  - Use
  - Best & Worst
Household Interviews

- 19 households: 9 in Rizal, 10 in Patrocenio: 18 men, 18 women
  - Participatory Mapping
  - Field visits: GPS mapping of husband and wife’s “best” and “worst” soil locations
Results: Gendered Soil Knowledge & Perceptions

Men
- Men have a physical perception of soils
- Large crops
- “Steep” soils

Women
- Women have a social, practical perception
- Small crops
- “Flat” soils
The men drew soils across greater areas than the women.
Men drew soils based on their physical characteristics.
Women drew soils based on land-use, ownership, and production.
GPS Mapping of Household “Best” and “Worst” Soils

Black polygon: best soil
Red polygon: worst soil
White polygon: farm boundary
Practices and Participation

Men work primarily on the farm
- Land preparation
- Planting
- Hired off-farm labor

Women work primarily in the house
- Weeding
- Marketing
- Sari-sari stores
- Cooking, cleaning, childcare
Access to resources

Men
• Pastureland
• Opportunities outside farming

Women
• Land
• Trainings
Gender-based Constraints

• Land insecurity
• Trainings
• Women and weeding
• Men and tillage
Opportunities

• Perceive need for soil conservation
• Fertilizer use
• Gendered decision-making
Recommendations

• Modify trainings
  – invite husband and wife
  – Include additional content applicable to women’s role in the farming household
  – Promote outside village centers

• Determine and communicate short-term economic benefits

• Incorporate participatory, geospatial, and socio-economic research to determine gender-based constraints and opportunities for CAPS adoption
QGIS: A mixed methods approach for studying gender in agriculture

- Revealed multiple layers of gendered soil knowledge and perceptions
- Displayed the spatiality of knowledge and perceptions and resources
- Contributed to qualitative GIS by exploring how GIS can contribute to social research
Salamat Kaayo!
Questions?