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ClimDev-Africa

COCOA FARMING HOUSEHOLDS IN GHANA CONSIDER ORGANIC PRACTICES AS CLIMATE SMART AND LIVELIHOODS ENHANCER

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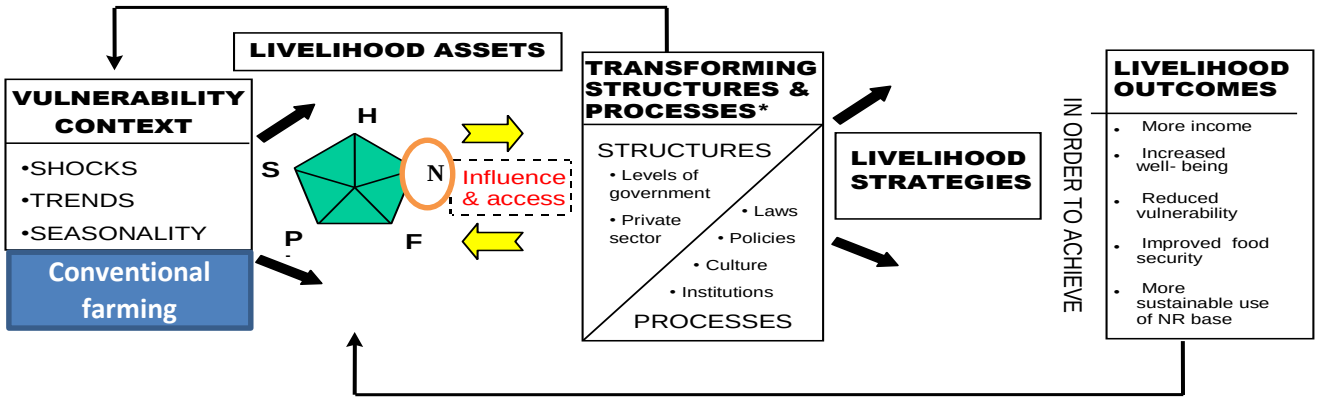
Problem statement 1/2

- Ghana's concern for global environmental change
- One of Ghana's key foreign exchange earner is Cocoa (*Theobroma cacao)*
- Looking for climate smart options (adaptation, mitigation and food security): study flora diversity in organic (O)and conventional (C) farms
- Following DfID (2000) Sustainable Livelihoods framework

Problem statement 2/2



Key Issue: Is there a difference in flora diversity between organic and conventional cocoa farms and do organic cocoa households have more sustainable livelihoods?

Methods

Data collection

- Flora survey: 16 organic and 16 conventional young farms
- Using a quadrat; 25 m X 25 m
- Household survey 32 respondents: ProEco Africa project Database Plus

Data analysis

- Jaccard Similarity and Shannon and Simpson's diversity indices
- Relative frequency to determine state of livelihood indicators such as food security, flora income, wellbeing (ability to cover health cost) and reduced vulnerability (FBO).

Key Findings

- The **Jaccard index of similarity** was 0.64.

Interpretation: Moderate similarity between O & C

- **Extent of difference**

Community	Measure	Organic index	Conventional index	U
Gyereso	Shannon index	0.914	0.818	21
	Simpson index	0.048	0.101	14*
Pasoro	Shannon index	0.805	0.795	19
	Simpson index	0.062	0.078	11**
Atwima Mponua district	Shannon index	0.808	0.762	124.5
	Simpson index	0.051	0.084	56.5***

Key Findings

Food security Indicator (s)	Mean response (%)		Standard error	P-value
	organic	conventional		
Flora availability all season	63.96	60.11	1.443	0.0807
Flora consumption	63.0	54.83	2.65	0.007
Flora sale	25.0	26.3	0.45	0.67

- **Income**: more (25%) organic farmers earned higher income (GHS150-400) from flora sale than conventional cocoa farmers
- **Wellbeing**: Slightly more (6%) organic farmers use more than 40% of flora income to cover health expenses.
- **Reduced vulnerability**: more (25%) organic farmers belonged to a farmer organisation /FBO

Conclusions/Recommendations

- There is a significant difference in flora diversity between organic and conventional cocoa farms; organic farms accommodate more species

- The organic cocoa households studied have more sustainable livelihoods; they have higher flora income, better wellbeing and are more resilience

- Organic farming should be encouraged especially during the establishment of new cocoa farms. This will contribute to mitigation as well as improve livelihood outcomes in the face of changing climate