

Rural Livelihood Strategies and Natural Resources in Oudomxay, Lao PDR



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Project Context



- Conducted within a CIAT - BOKU research Project entitled 'Spatial trade-off analyses for site sensitive development interventions in upland systems of Southeast Asia'
- Site specific information on natural and socio-cultural resources are required to facilitate effective project interventions
- Three components:
 - GIS analysis of fallow systems
 - **Livelihood analysis**
 - Market chain analysis & learning alliance

Background

Country: Lao PDR

Province: Oudomxay

District: Beng

Village: Mang

- High ethnic & linguistic diversity
- 80% population is rural
- 40% incident rate of rural poverty
- Dependent on natural resources



Objectives

Overall objective: Study the interrelations between changing access to specific natural resources and rural livelihood strategies of villagers within different wealth categories and different genders.

Objective 1: Provide site specific information on the natural resources utilized for specific rural livelihood strategies

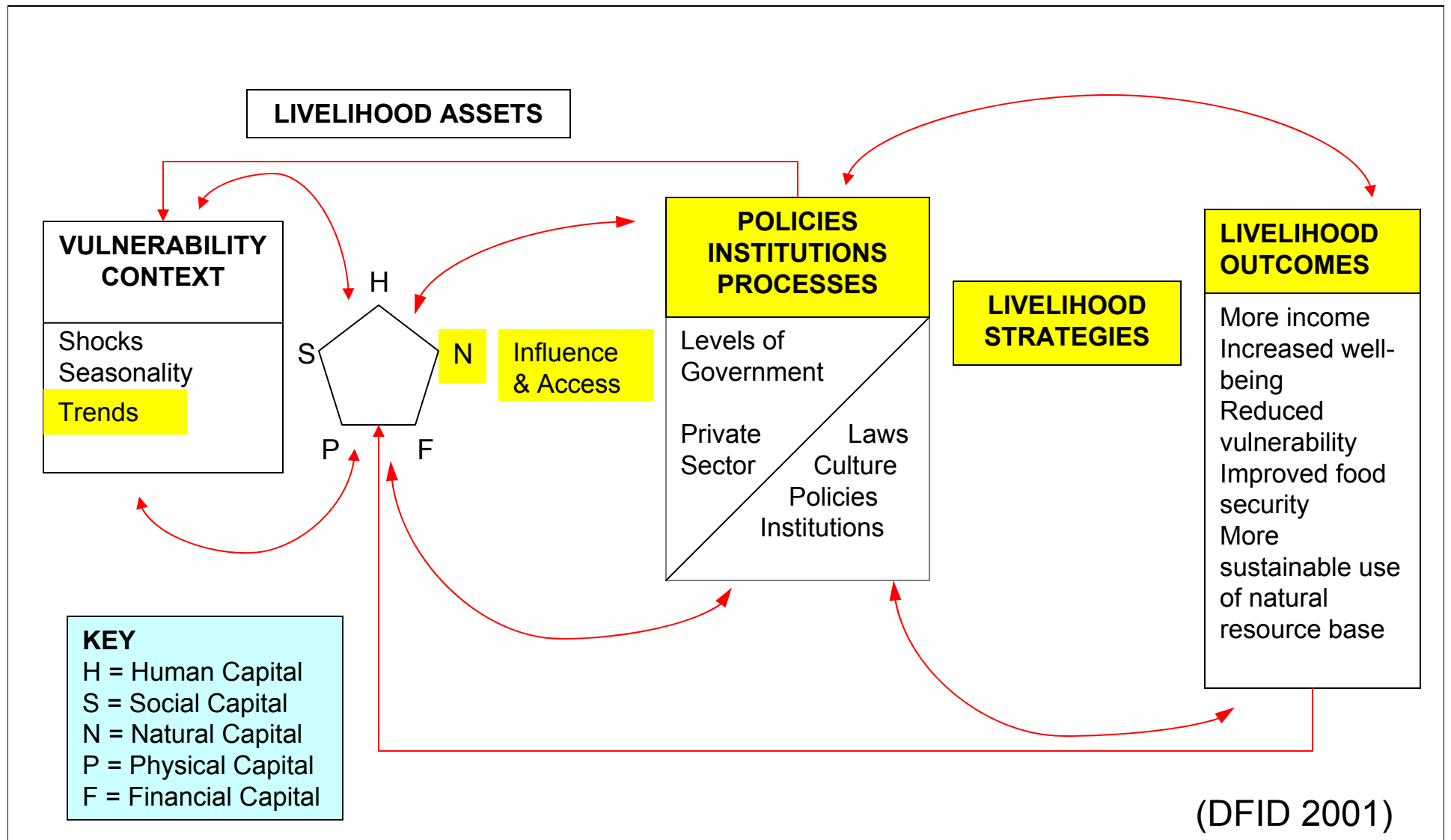
Objective 2: Determine the choice of livelihood strategies upon a timeline considering the past, present and future livelihood options

Objective 3: Determine if and why access to specific natural resources has changed over time (approximately 10 years).

Objective 4: Determine the livelihood outcomes upon a timeline.



Sustainable Livelihoods Framework



Methodology

1. Chosen study area: Mang village



2. Focus Groups

- Exploratory phase to support the development of questionnaire

	Wealth Category 1 (Rich)	Wealth Category 2 (Medium)	Wealth Category 3 (poor)
Female	3	3	3
Male	2	2	2

Methodology II

3. Semi-structured interviews

	Wealth Category 1	Wealth Category 2	Wealth Category 3
Male	10	10	10
Female	10	10	10
Total # of Participants	60		

- Stratified random sampling
- Wealth and gender
- Equal size sampling
- Pre-testing of questionnaire
- Ranking by Polaroid photographs



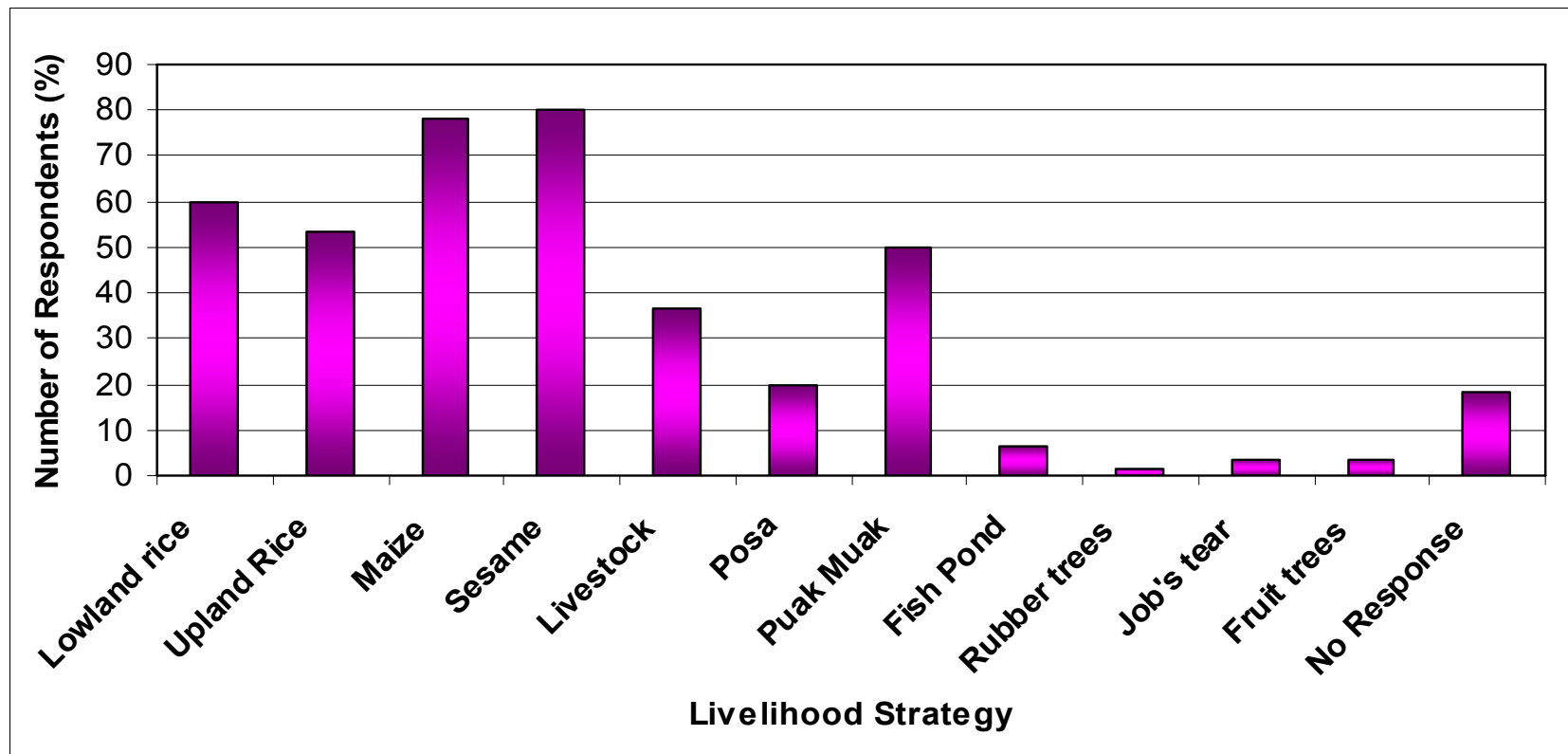
4. Data analysis

Quantitative Analysis: two sample t-tests & two proportional z-tests (using MiniTab)

Qualitative Analysis

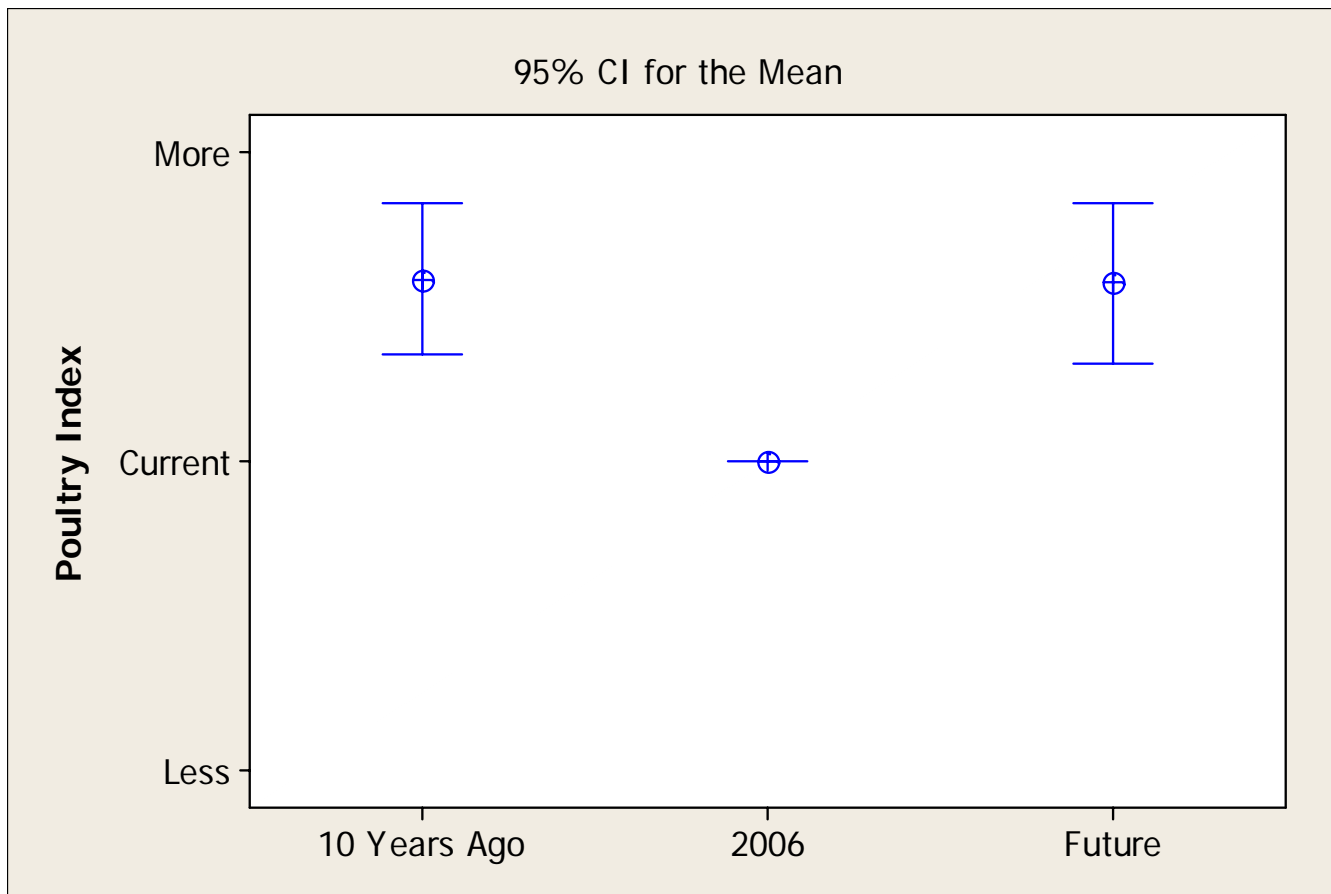
Important Livelihood Strategies

- Top 4 livelihood strategies: lowland rice, upland rice, maize & sesame
- Supporting livelihood strategies: livestock, posa, puak muak, fish ponds, rubber trees, fruit trees & Job's tear
- Non-Agricultural livelihood strategies: teacher, trader, shop owner & laborer



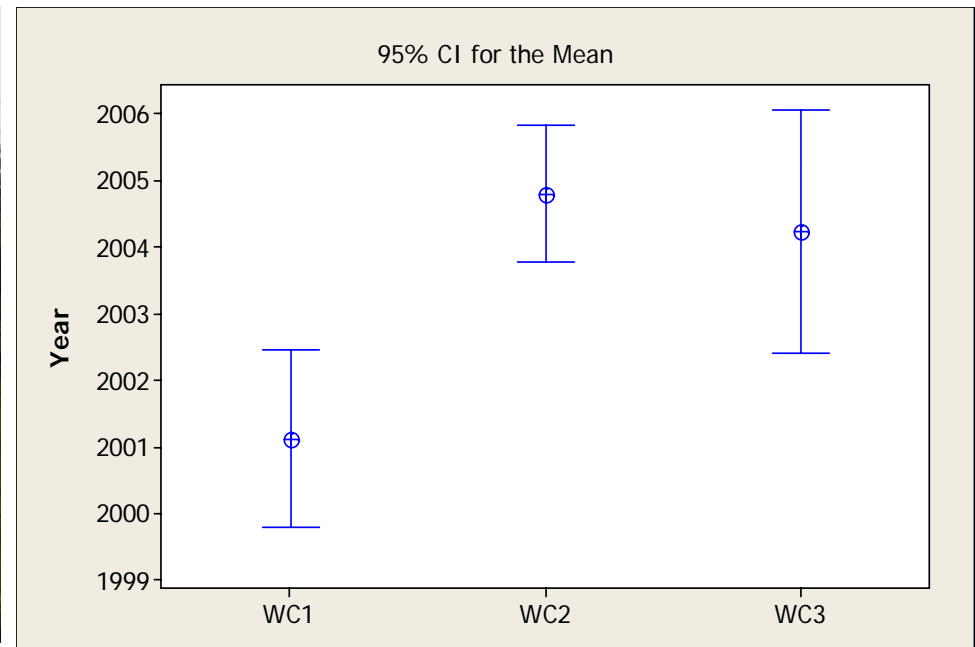
Changes in Livelihood Strategies

- ↓ Upland rice and livestock
- ↑ Lowland rice, maize, sesame, posa, puak muak, rubber trees, fruit trees and fish ponds



Livelihood Strategy Differences

- WC1 cultivates more lowland rice and adopted this strategy earlier (>95% confidence)
- 2 respondents in WC1 were the first (1997) to cultivate commercial maize
- Two respondents in WC1 have large fruit tree plots – the first in 2003
- The average person in WC1 is more likely to be a trader, teacher or shop owner



Livelihood Strategy Differences II

- People in WC2 and WC3 consider upland rice more important than WC1 (95% confidence)
- People in WC3 are more likely to be a laborer than WC1 or WC2 (>95% confidence)
- Women are more likely to be a laborer than men (>95% confidence)
- Only respondents in WC2 and WC3 indicated selling their weaving
- Only respondents in WC3 selected fish ponds within their top 4 livelihood strategies



Changes in Natural Resources

Land

- Land Allocation implemented in 2004
- Buying of land is occurring
- Temporary land certificates
- Land disputes are occurring
- Land available for clearing is decreasing



Water

- Communal taps in village
- Irrigation systems established
- ↓ water quantity in streams



Changes in Natural Resources II

Forest

- 79% of respondents indicated ↓ in forest
- 100% of respondents indicated ↓ in puak muak and posa in the forest

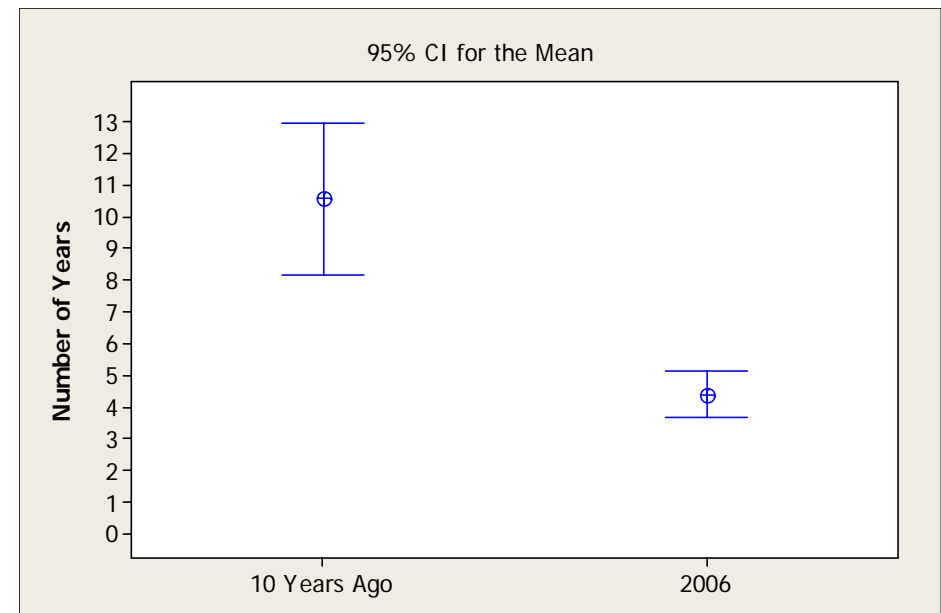


Seeds

- Seeds can now be accessed from outside through traders or traveling

Soil Quality

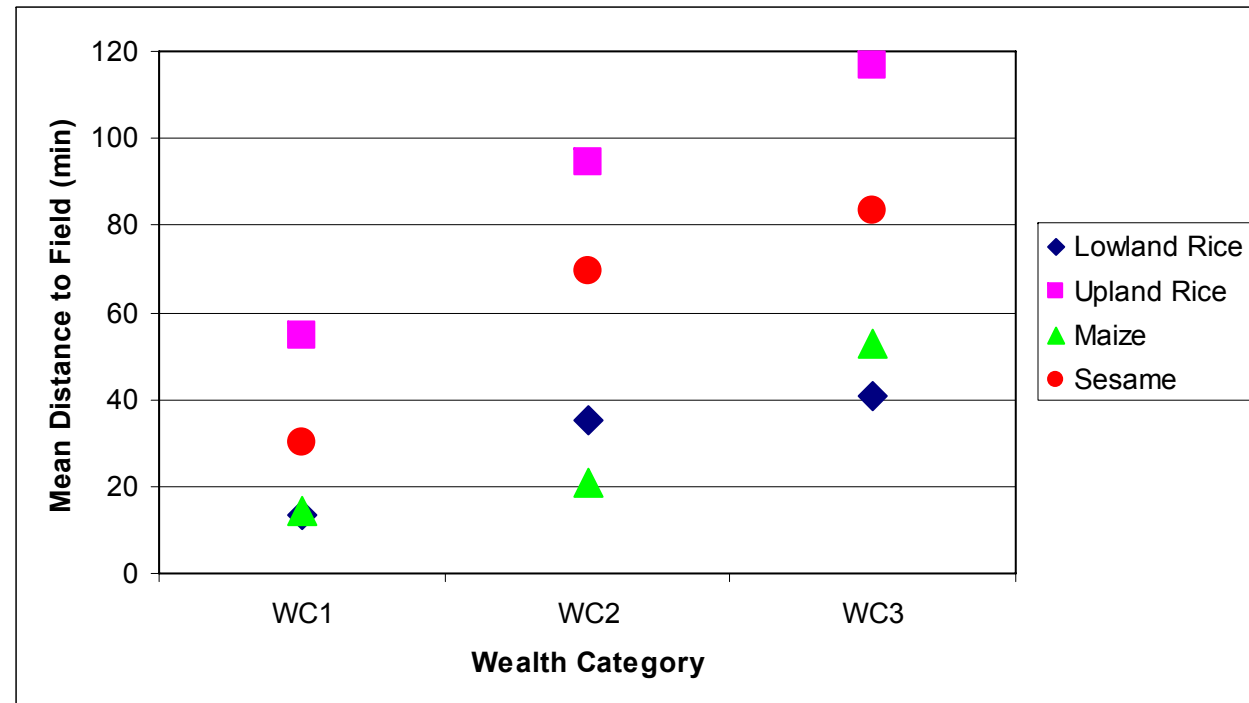
- Number of years upland field is left to fallow has ↓



Differences in Natural Resources

Land

- WC1 land is closer than WC2 and WC3 (> 95% confidence)
- Females take longer to get to their fields than males
- WC1 has more lowland and maize land than WC2 & WC3 (>95% confidence)



Water

- Proportionally more respondents in WC1 have access to the irrigation system than WC2 or WC3

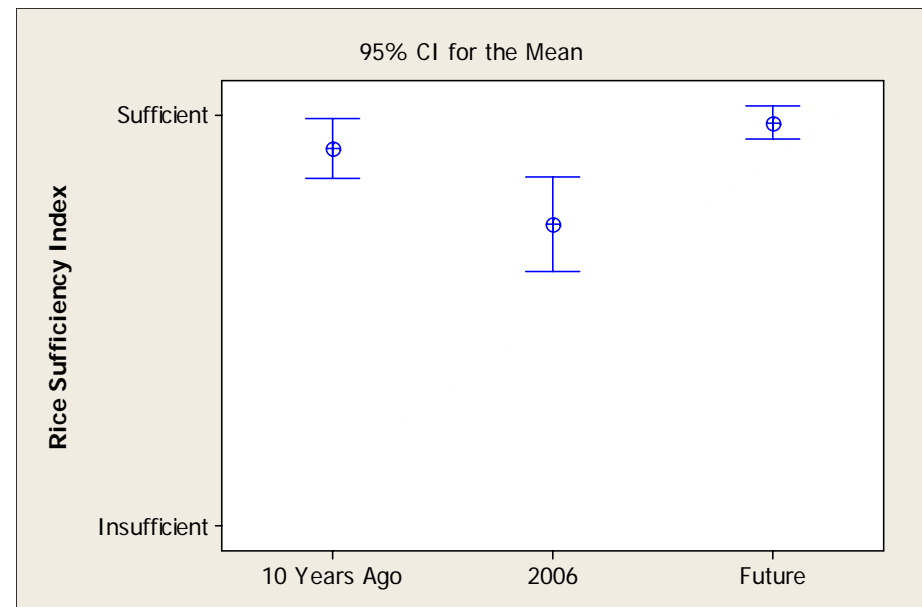
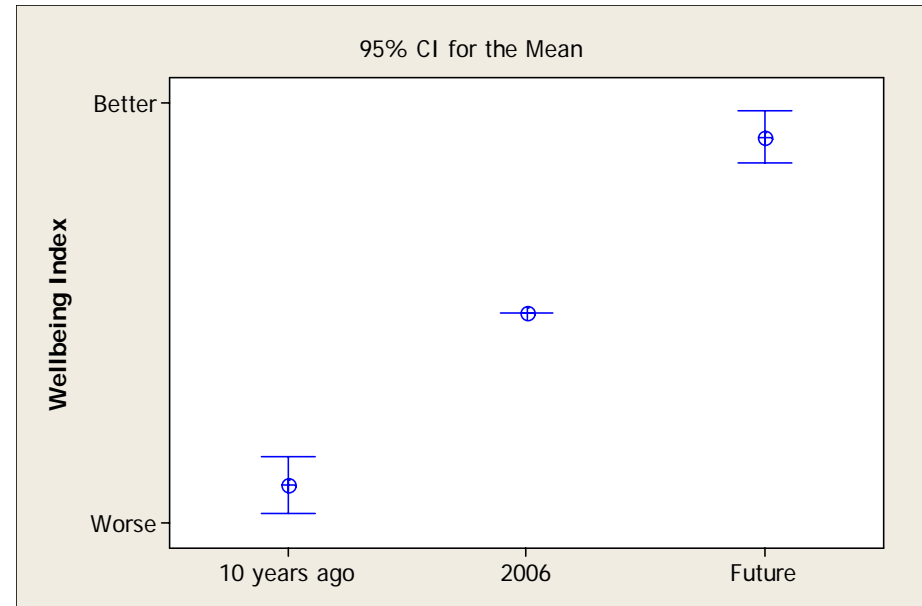
Livelihood Outcomes

↑ Wellbeing

- Support projects
- Gravity feed water system
- School
- Road access
- Rice mills available
- Easy to travel
- Easy to buy and sell things
- Hospital close by
- Money is easy to acquire
- Health information available

↑ Income

↓ Food security



Discussion Items

Livelihood Strategies

- market based economies - risk of fluctuating market prices
 - Support diversity of crops and non-agricultural livelihood strategies
- Sesame and maize important across all WCs
- Food security circumstance ↓ in shifting cultivation + limited lowland
 - Support alternative livelihood strategies and improving upland rice
- Expected ↑ in livestock
 - Support with forages
- Adoption Disparities
- Rubber Trees



Discussion Items II

Natural Resources

- Differences in access to natural resources between WCs
- Intensification of land use – impacts on soil quality
- ↓ in forest and the relationships with tree plots
- ↓ in water quantity in streams



Conclusion

- There are significant changes in livelihood strategies and access to certain natural resources over the past 10 years.
- There are certain differences in livelihood strategies employed and the accessibility of natural resources between wealth categories
- It is important to be aware of these changes and differences when implementing development interventions - working with the capabilities of the different families



Thank you

