

# Crop choice: the social factors influencing oil palm smallholders and their ecological effects

## Context and research question

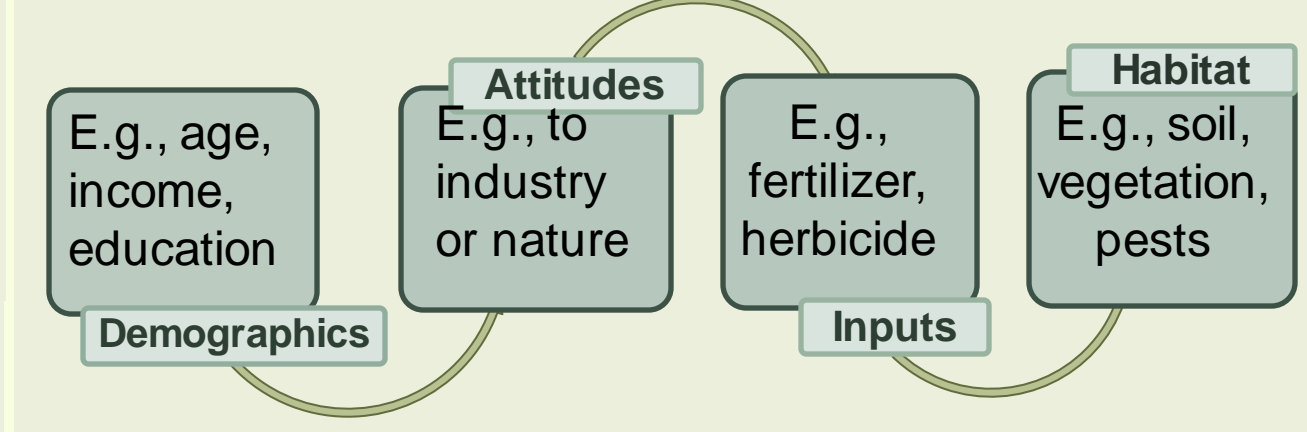


- Oil palm is replanted every 20 years
- Polyculture planting affects habitat functions, biodiversity, farmer socio-economics, food security, and is common in smallholders

**Why do farmers replant in a polyculture (or not), and what are the ecological impacts of that decision?**

## Method

We surveyed key features in mature monoculture (~20yr), immature monoculture (~6yr), & immature polyculture (~6yr, >10% non-op) smallholder plantations in Malaysia



## Results

- Stepwise regression and PCA showed no significant differences in socio-demographics or attitudes
- While management inputs did not differ significantly between groups, habitat features did
- There was less bare ground and epiphyte richness in mature monocultures, and different pests affected different plantations

## Implications

- Farmers may treat plantations the same although requirements differ (e.g., polycultures often require less herbicides) → lack of targeted management
- Different pests affect different plantations → while inputs are the same, ecosystem dynamics are affected
- Socio-economics and understory management methods are consistently relevant and key to encourage 'best practice'