Regenerative Income Strategies for Zambia's Miombo Woodlands

Final presentation

Team 3.150

July 2023

Content

- Our team
- Objective & research overview
- Long list & short list
- Recommendations
- Strategies
- Considerations & moving forward

Who are we?

Sager Bradley	Forest and Nature Conservation
Casper Hoes	International Development – Economics
Thomas Jansen	International Development – Sociology
Mobi van der Linden	Economics of Sustainability
Simone Treur	Tourism, Society & Environment
Femke van Zetten	Animal Sciences

Objective

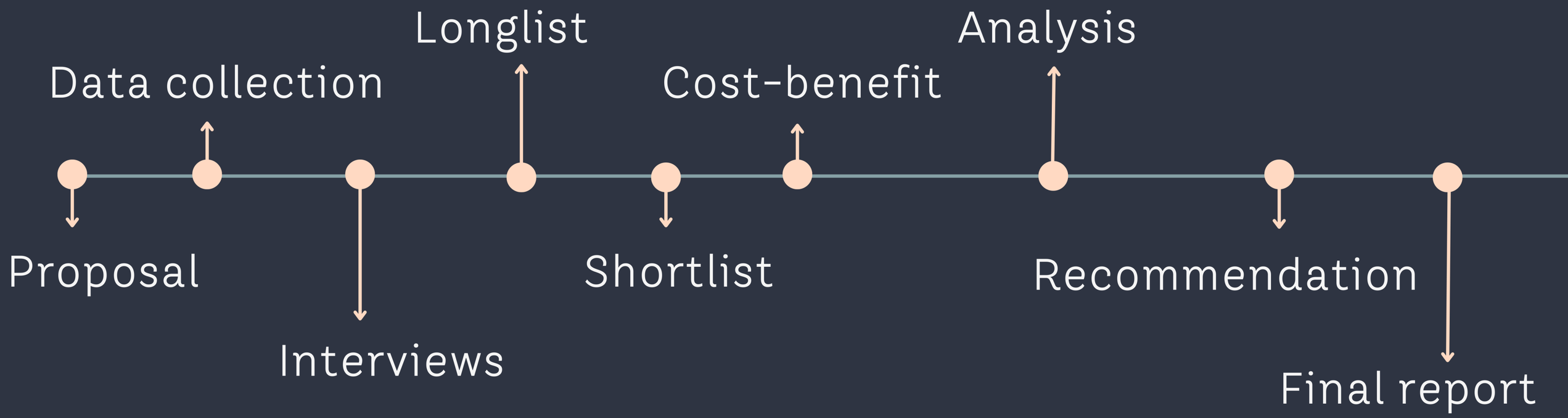
Local income

- Miombo woodland

Forest degradation ⟶ Deforestation

- **Goal** Provide the Research Farm income generating strategies while conserving the forest

Research overview

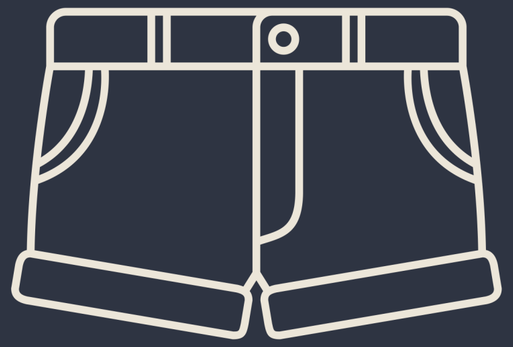


Long list

- 25 items
- Multiple criteria
  - Ecological feasibility
  - Logistics
  - Profitable
- E.g., Chikanda orchids

Long list	Chikanda orchids
Mupundu fruit	Natural toothbrushes
Mushrooms	Fodder
Seedlings	Wild vegetables
Goats, donkeys, guineafowl, chickens, ducks	Essential oils
Masuku-based products	Dried leaves/herbs
Mopane caterpillars	Medicinal plants
Honey	Sustainably harvested timber
Mufutu	Sustainably harvested charcoal
Fish farming	*Gliricidia sepium*
International seed market	Munkoyo (fermented drink)
Bamboo	Wooden items
Payments for Ecosystem Services	Tourism

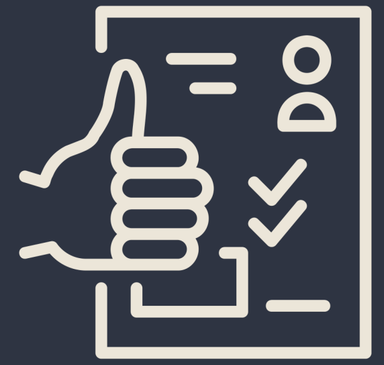
Short list



- Eight strategies
- Assessed on:

Profitability	**€ - €€€**
Ease of implementation	**● - ●●●**
Environmental	**✓ / ○ / ✖**
Social	**✓ / ○ / ✖**

Recommendation



- Combination of forest products due to seasonality
- All strategies require
  - Investment
  - Infrastructure

Recommendation

Short term

Mushrooms 

Fruit trees 

Honey 

Tree seeds 

Caterpillars 

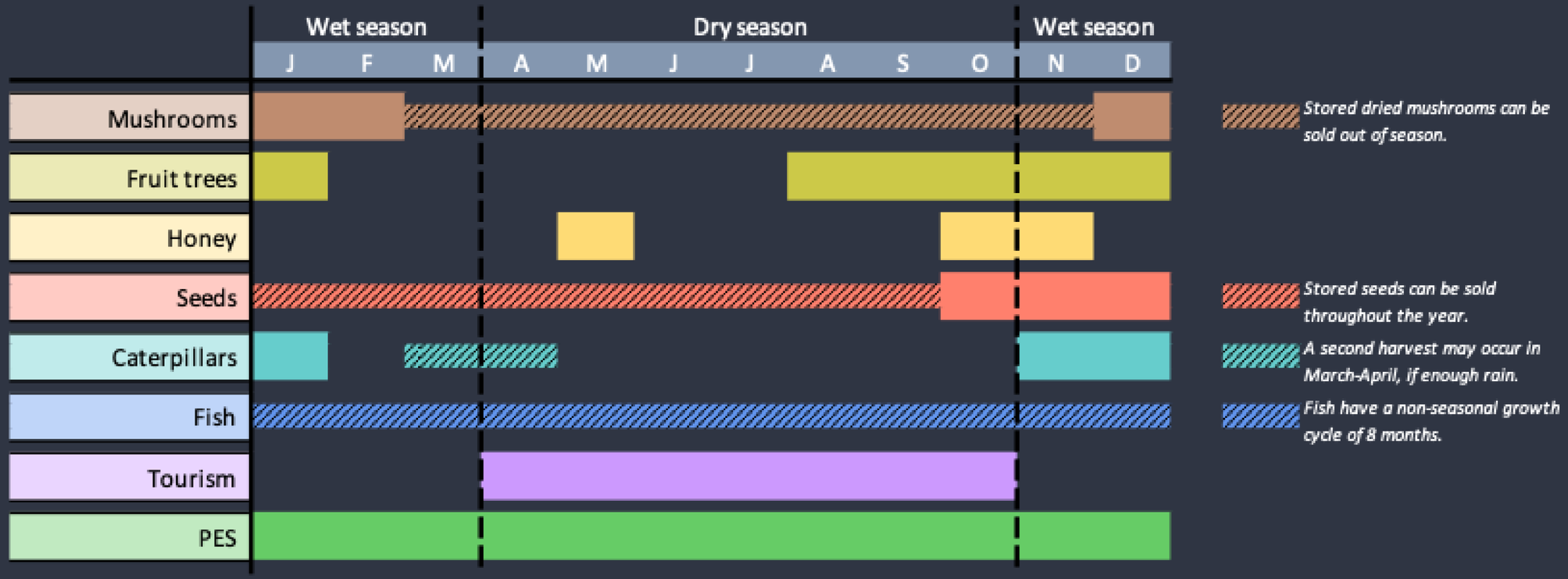
Long term

Fish farming 

Tourism 

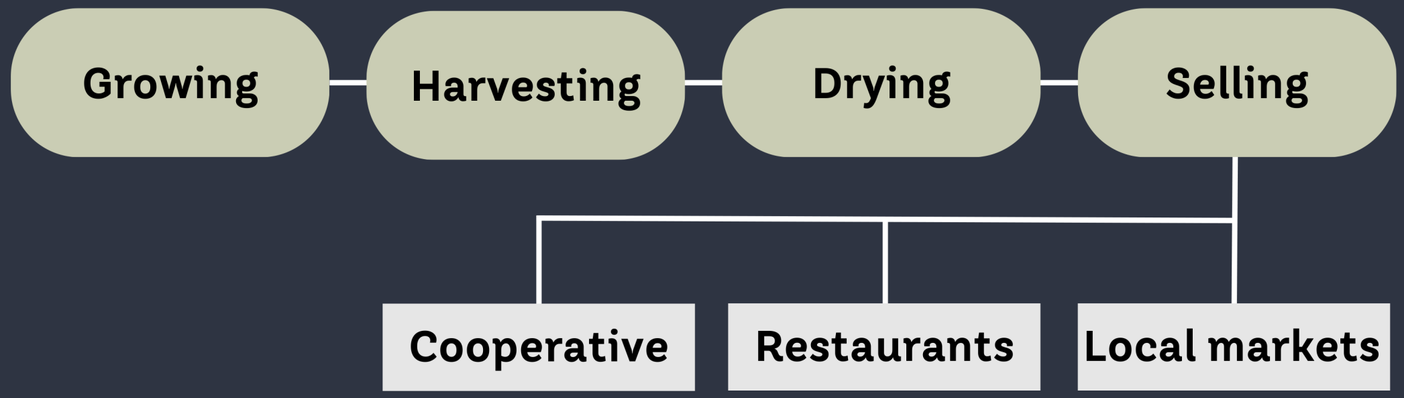
Recommendation

Seasonality of product harvesting



Mushrooms

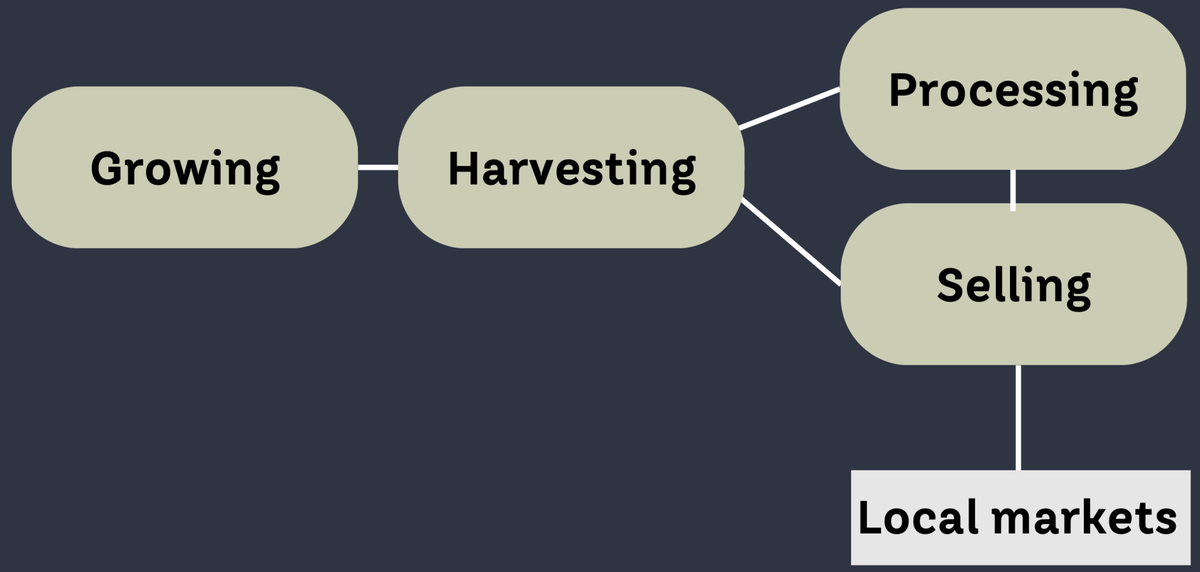
- Production dried mushrooms
- Already present
- Drying ⟶ year-round income



Profitability	€€
Ease of implementation	●●●
Environmental	✓
Social	✓

Fruit Trees

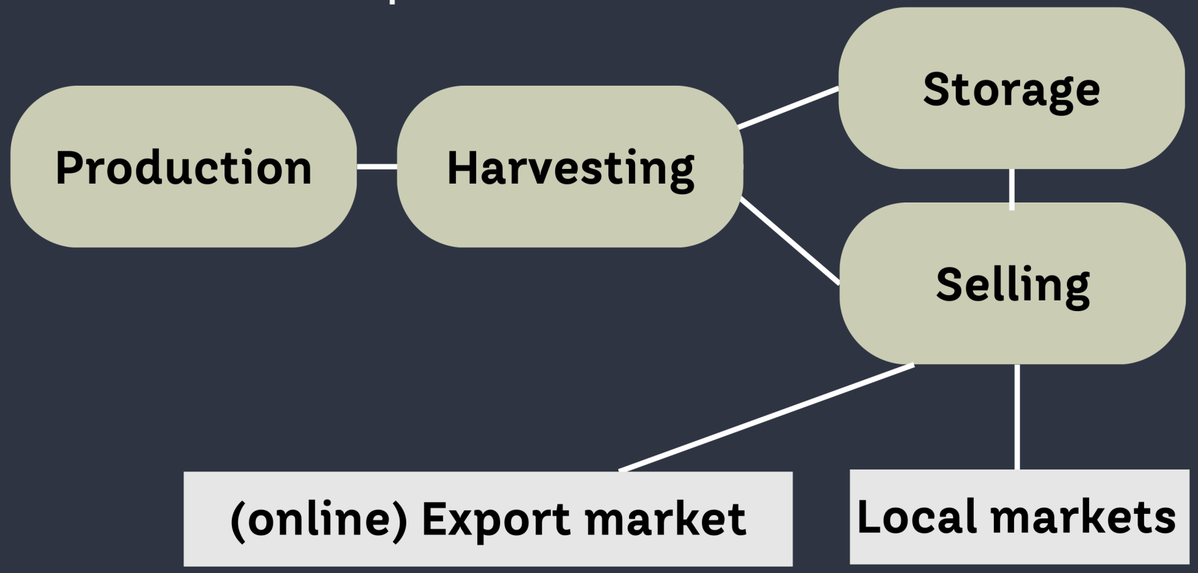
- Harvesting and selling fruit such as Mupundu
- Already present
- Relatively low margin



Profitability	€
Ease of implementation	●●●
Environmental	✓
Social	✓

Honey

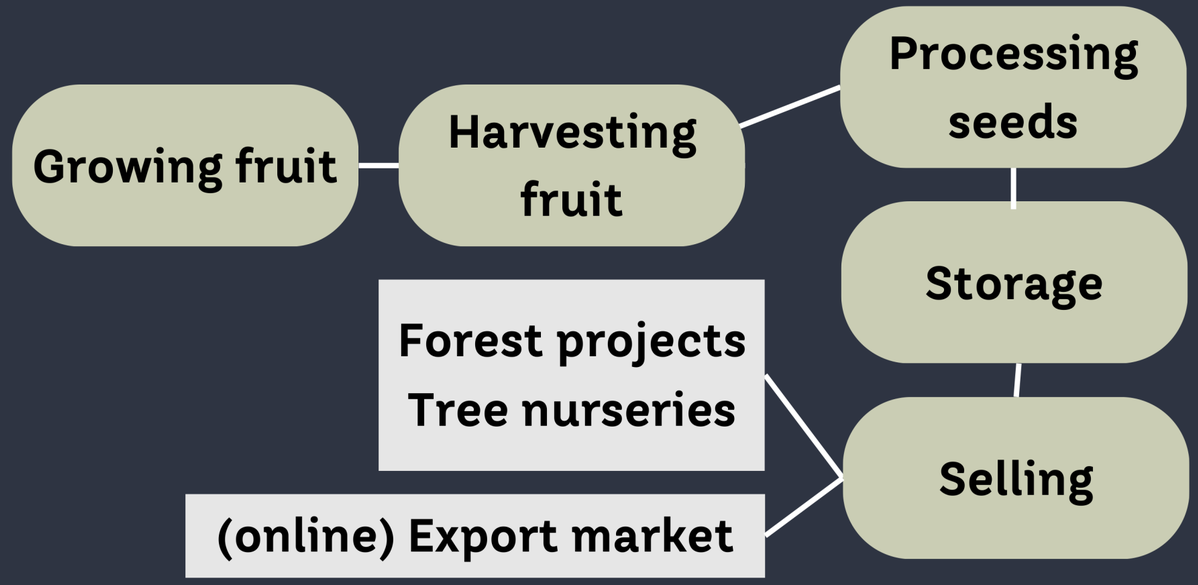
- Bee keeping through bark hives
- Forest compatible
- Easy accessible local market
- Cooperative



Profitability	€€
Ease of implementation	●●
Environmental	✓
Social	✓

Tree seeds

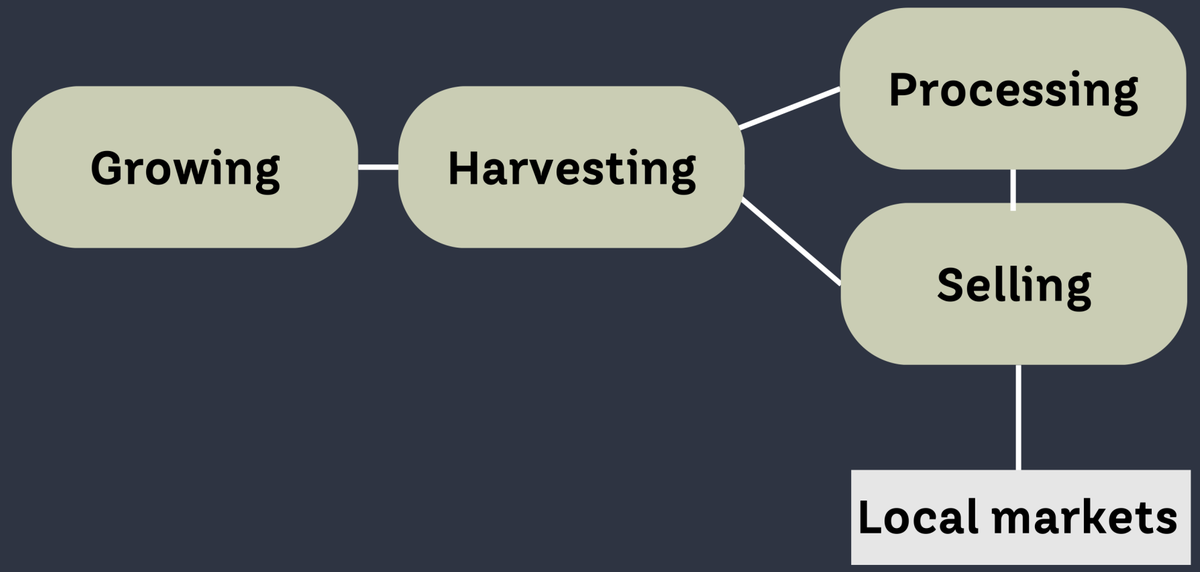
- Growing market
- High Markup
- Long shelf-life ⟶ year-round income



Profitability	€€€
Ease of implementation	●●
Environmental	✓
Social	✓

Caterpillars

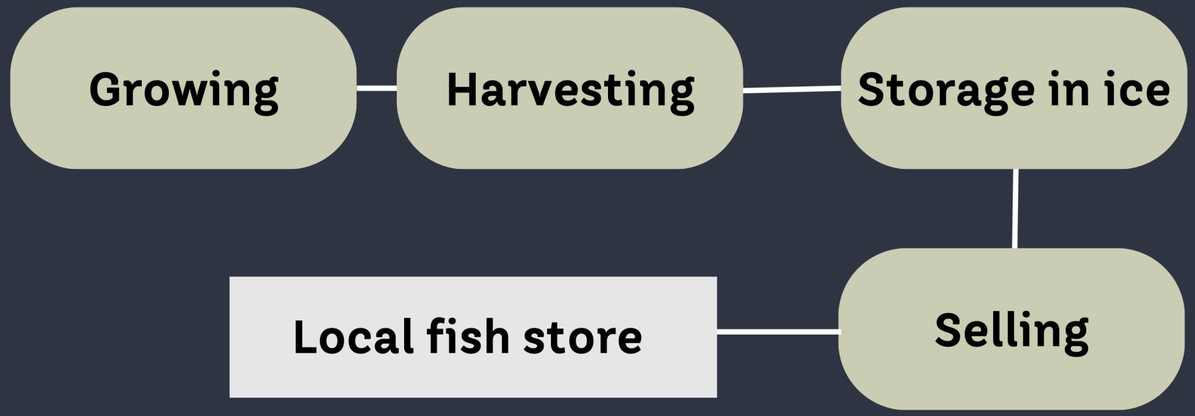
- Production of caterpillars
- Naturally occur on Research Farm
- Symbiosis with trees



Profitability	€
Ease of implementation	●●●
Environmental	✓
Social	✓

Fish farming

- Start small-scale fish farm
- Excavated pond next to river
- Bamboo sticks in pond for filtering
- Use of waste streams as feed



Profitability	€€€
Ease of implementation	●
Environmental	○
Social	✓

Tourism

- Overnight stays and workshops local knowledge; combine with local products
- **But:**
  - Tourism underdeveloped in the area; no wildlife
  - No facilities present
  - High investment costs needed

Profitability	**€**
Ease of implementation	●
Environmental	○
Social	✓

Payments for Ecosystem Services

A payment scheme that promotes the increase or preservation of services provided by the ecosystem.

It must be implemented at the landscape scale and requires a significant start-up investment.

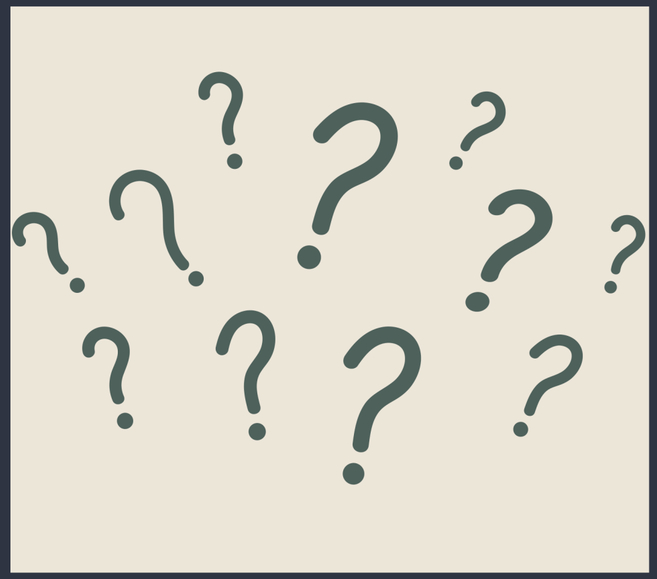
Profitability	**€**
Ease of implementation	●
Environmental	✓
Social	✓

Considerations

- Limited agency
- Ethics
- Conflicting goals
- Positionality

Moving Forward

- Develop infrastructure
- Join cooperative
- Involve local universities
- Local market research
- Increase community participation and collaboration



Questions?