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BioTrade, value chain, scientific & management interface. Case study in Madagascar

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A methodological framework
Main issues

- Sustainable exploitation of Centella asiatica

  Contract & regulation failure for BS

- 40 years of exploitation

  Lessons learned?

- Contradiction between economic development, regeneration and social development

  Sourcing as a development lever or a poverty trap?

  ABS perspective
Main results

- 40 years of exploitation: plants regenerates well
  - Demand for plant’s quality by the value chain allows limited management of regeneration
  - Leaf picker have developed their own sustainable practices without being remunerated for this purpose

- Contradiction between plant’s regeneration and social development
  - Leaf picker revenue is under poverty line: poverty trap?
  - System vulnerable to external shocks
Result 1: value chain does not manage sustainability

- **Integrated**
  - Pharma 60 tons
  - 110 tons

- **Cosmetic Pharma**
  - 60 tons

- **Cosmetic Food**
  - ?

- **Agents**
  - Agents (100)

- **Sub collectors (hundreds)**

- **Leaf picker (thousands)**

**Flow Diagram**

- **Europe**
  - National or regional
  - Regional
  - Village

**Madagascar**

- **Final product**
  - Extractor

**Tasks**

- Buy, transport, Export
- Buy, dry, stock, condition
- Buy daily, dry
- Pick, dry, select

**Graphical Components**

- MADAGASCAR
- EUROPE
Result 2: regeneration of the resource linked to exploitation by the poorest
### Result 3: A vulnerable system – no common goals

#### Value chain

<table>
<thead>
<tr>
<th>Firms</th>
<th>Land owner</th>
<th>Public actors</th>
<th>Local traders</th>
<th>Leaf picker (landless)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>Stability of community and land use control</td>
<td>Taxes</td>
<td>Income</td>
<td>Income 0,7 € / day Poverty line : 1€</td>
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<tr>
<td>Quality</td>
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<tr>
<td>Price</td>
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#### Territory / production area

- **Security of sourcing**
- **Sharing of value**
- **Regeneration**

#### Deconnexion

- **Taxes**
- **Income**
- **Price**
- **Quality**
- **Quantity**
- **Stability of community and land use control**
5 scenarios show risks in value chain and territory

<table>
<thead>
<tr>
<th></th>
<th>1/ No change</th>
<th>2/ Increase demand &amp; price</th>
<th>3/ Increase poverty</th>
<th>4/ CC &amp; decrease plant quality</th>
<th>5/ Centella star ingredient</th>
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</thead>
<tbody>
<tr>
<td>Sourcing</td>
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<td>Social impact</td>
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<td>Leaf picker income</td>
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<td>Regeneration</td>
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<td>Active principle</td>
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</table>

1. No change
2. Increase demand & price
3. Increase poverty
4. CC & decrease plant quality
5. Centella star ingredient
Individually, actors are limited to address these issues.
Conclusion

Further analysing these scenarios:
• companion modeling with stakeholders
• at the scale of value chain and territory

For addressing:

– Price payed to leafpicker: below poverty line

Benefit sharing / Fair trade

– Territory: local traders opportunism & precarious land use

Blocages on price change

– Value chain: Traçabilité (role, responsibility, advantages)

As a response?
Thank you for your attention

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