Combining technical, organizational, and value-chain approaches for sustainable land management and agricultural development in Kham basin, Xieng Khouang Province

Agrarian transition in Kham district

Labour productivity

- Maize expansion and intensification: maize monocropping under ploughing + herbicides
- Specialization process: Maize monocropping, manual weeding + herbicides
- Introduction of 1st hybrid maize (VNL 10, CP888) and herbicides
- Rotational (short-term fallows) and diversified upland crops: upland rice, chili pepper, banana...

Use of new maize hybrids and mineral fertilizers

Development of motorized ploughing services

Benefits from maize re-invested in paddy land expansion

Development of drying and storage facilities (silo)

Use of new maize hybrids and mineral fertilizers

Development of drying and storage facilities (silo)

Maize farm gate prize decrease

Land conversion to pasture (livestock raising)

Land conversion to other annual crops (e.g. cassava, groundnut...)

Land conversion to plantations?

Weeds

Land degradation

Maize: increase use of inputs (fertilizers, herbicide)

Before the 2000s

In 2015

Decision making process

Farming system

- Cropping systems
- Livestock system
- Non-farm and off-farm activities
- Gathering/Hunting

EFICAS project proposal in support to the Kham basin ‘Land Regeneration Initiative’, 11 March 2016
PAFO ‘Land Regeneration Initiative’

Current activities in Kham basin

(1) **Agricultural diversification**: Establishment of pasture plots for cattle fattening

(2) **Improved soil fertility management**: Introduction of legume crops in association/rotation with maize

(3) Sensitization on **residue management** (no burning) and **reduced tillage** (every 2-3 years)

(4) **Subsidization of a mineral fertilizer** imported from Vietnam

(5) Monitoring and sensitization on **safe use of pesticides**

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PAFO ‘Land Regeneration Initiative’

Key constraints / possible failure factors

- **Market**: Apparent absence of diversified market demand, notably for legume crops
- **Cropping systems**: Absence of adapted methods and tools to assess the sustainability (socio-economic, environmental) of alternative cropping systems
- **Organizational**: Local crop-livestock management unadapted to dry season legume crops cultivation
- **Policy**: need for law enforcement (e.g. agri-input suppliers contributing to promote misuse/overuse of banned pesticides amongst farmers)
- **Coordination**: limited communication between the different stakeholders (producers, traders, local GoL agencies, projects) to move forward more efficiently on the different issues (technical, organisational, value chains)
### Current activities <-> Key constraints / failure factors

**We need a more integrated intervention framework**, with:

- **Enhanced coordination and information-sharing**
- **Complementary research and development activities**, in order to:

1. Evaluate the potential for development of *value chains* for different commodities (to be defined: e.g. maize, complementary legume crops, cattle-forages)
2. Engage village communities into *participatory landscape planning* (notably regarding 2 major topics: crop-livestock interactions & natural resources management)
3. Define *multi-criteria assessment* methods and tools allowing to assess the sustainability (economic, environmental, social) of alternative cropping systems
4. Develop *communication methods and tools* to facilitate information-sharing and negotiation processes between the different stakeholders
5. Develop *outreach models* and advice for local government policy to support the adoption of more diversified maize-based farming systems in Kham district

### Proposed activities

1. **Coordination and information-sharing**
   - Organisation of regular roundtables and workshops involving development and private sector projects active in and around Kham basin

2. **Value chain studies**
   - Participatory definition of the targeted commodities
   - Cross-border studies (Vietnam)

3. **Village land-use planning**
   - Piloting of TABI FaLUPAM (8 pilot villages), with strengthened efforts to make use of the information produced by the various projects that have operated in Kham basin in recent years and fed by the above value chain studies

4. **Multi-criteria assessment of alternative cropping systems**
   - Developing methods and tools to assess the sustainability (economic, environmental, social) of cropping systems

5. **Negotiation platform**
   - Developing methods and tools (using e.g. role play games) to facilitate information-sharing and negotiation processes between stakeholders
Proposed activities

6. Structuring of farmer groups
   – Technical trainings, farmer-to-farmer exchanges and field visits involving e.g. the emerging provincial maize traders association and large scale agribusinesses in order to facilitate interactions and information-sharing across villages and with the private sector

7. Agricultural information system
   – Radio broadcasts and establishment of a mobile sensitization team dealing with safe use of pesticides, agricultural land management, market opportunities, contract farming, etc.

<table>
<thead>
<tr>
<th>Proposed activities</th>
<th>Main partners involved</th>
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<tbody>
<tr>
<td>0. Current activities</td>
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<tr>
<td>0.1. Establishment of pasture plots for cattle fattening</td>
<td>Lead: PAFO</td>
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<td>0.2. Development of maize-legume crops associations/rotations</td>
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<td>0.3. Sensitization on residue management/reduced tillage</td>
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<td>0.4. Subsidized mineral fertilizer and credit schemes</td>
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<td>Lead: PAFO Contributors: all interested organisations/projects</td>
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<td>2. Value chain studies</td>
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<tr>
<td>Cross-border studies Laos-Vietnam on market opportunities for different commodities</td>
<td>Lead: EFICAS Key contributors: NUoL, ACIAR (study HP-SL), LURAS?</td>
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<td>Lead: TABI Key contributors: PAFO, DoNRE</td>
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<td>Lead: EFICAS (2 pilot villages) Key contributors: PAFO, ??</td>
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Thank you for your attention...