Community-based Agricultural Development Plans 2016 – 2017

in Houaphan province

EFICAS workshop, Monday, March 27th 2017, Luang Prabang

Outline

- Target villages in Houaphan province
- Overview of development pathways
- Main achievements in project activities
  - 1. Livestock intensification
  - 2. Diversification of upland cropping systems
  - 3. Intensification of lowland cropping systems
- Complementary approaches for 2017
- Problem and strength

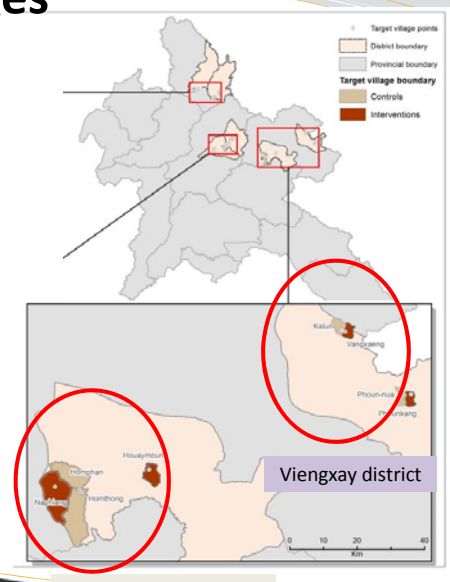
Intervention villages

Viengxay district
Phounkang
- Thai
- Paddy
- Bamboo

Vangseng
- Thai
- Paddy
- Main cash crop

Houameuang district
Namthip:
- Khmu
- Paddy
- Main cash crop

Houaymoun
- Khmu
- Paddy
- Main cash crop



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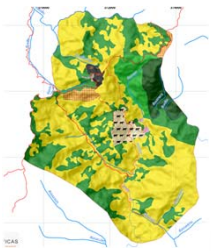
Overview of development pathway

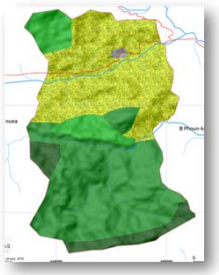
PLUP Participatory Land Use Planning

Naphieng (NUDP/GIZ, 2012)



Houaymoun (CLiPAD/GIZ, 2014)

Vangseng (NU-IRP/GIZ, 2011)

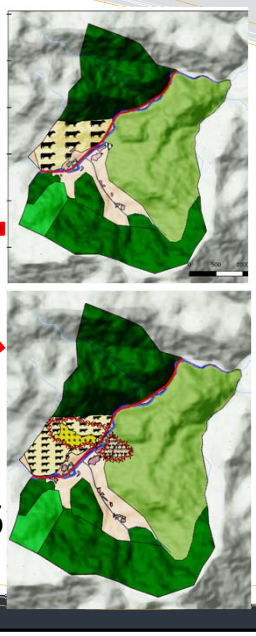


Phounkang (GRET-SNV,2013)

Development pathway

- Increasing village communities engagement into the design of more **sustainable landscape management**,
- Supporting **eco-friendly intensification: i**ntegration of crop-livestock-forestry activities into land use plans,
- Agricultural land management and land registration

2014



2016

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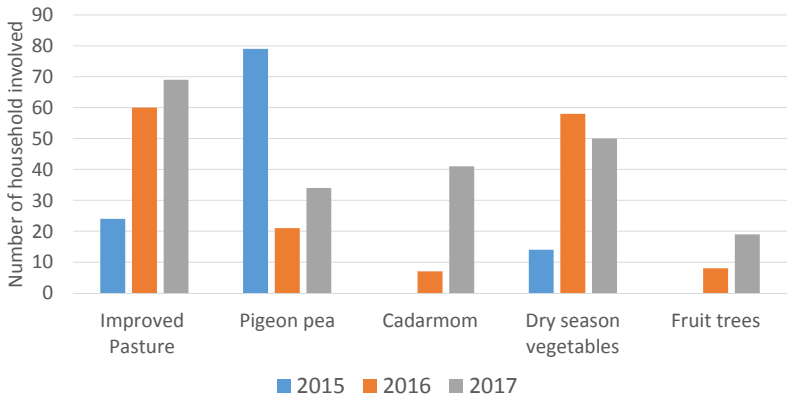
Villagers' participation



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Main achievements in project activities

1. Livestock intensification

Objectives:

- More profitable livestock systems (fattening)
- Intensification and diversification of cropping systems
- Manure collection for cropping system improvement
- Better vaccination for lower mortality

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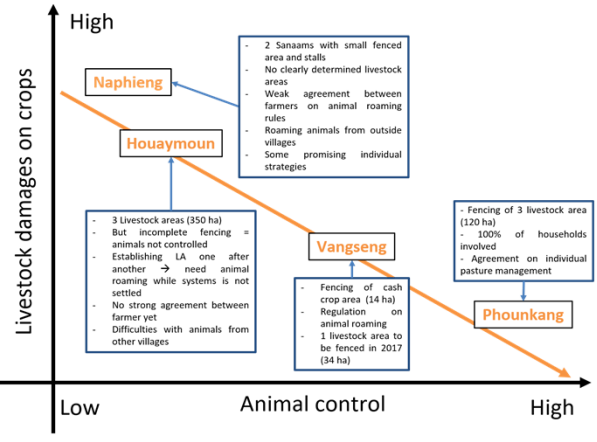
1. Livestock intensification

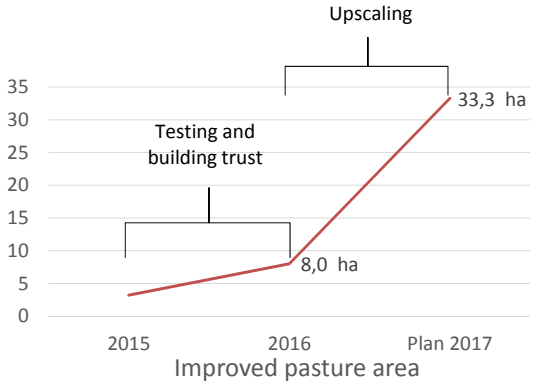
1.1 Controlling animal movements

Several approaches toward livestock management



1. Livestock intensification

1.2 Improved pastures



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Main achievements
in project activities

1. Livestock intensification

1.2 Improved pastures

- Farmers have difficulties to organize collectively to establish and manage improved pasture
- Many farmers do not have a clear strategy on how they will use improved pasture
- Animal roaming still constrain improved pasture establishment

Improved pasture

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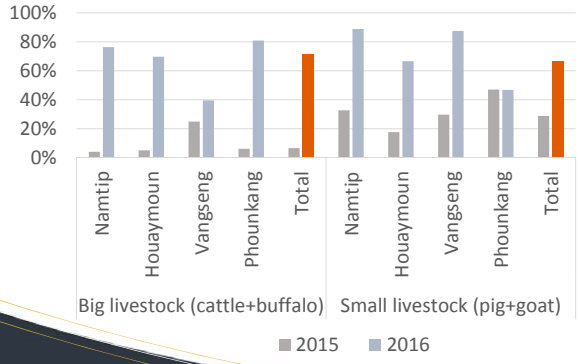
1. Livestock intensification

1.3 Invest in animal health

- Farmers are not yet autonomous on vaccination
- Lack of leadership from village veterinary workers



Vaccination operations

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2017 Strategy

Continuing the development of improved livestock systems:

- Expend the permanently protected livestock area → increase participation of farmers in this activity
- Ensure forage resources → developpe improve pastures and their use
- Build capacity at village level for veterinary services

Overcoming management issues:

- Switch from collective IP management to individual management
- Encourage collective management livestock area through capacity building of village livestock committee
- Repair and improve existing fences + insure capacity building for long term maintenance

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2. Diversification of upland cropping systems

- Objectives:
  - Diversify and improve income sources → better resilience
  - Provide additional protein sources →better nutrition
  - Maintain fertility and profitability of upland shorter fallows
  - Limit the need for slash and burn systems

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- Project achievements

Activity	Number of HHs 2015-2016	Dimensioning
Improved fallow with pigeon pea	93	39 ha
Stick lack production	43	300 kg of inoculant
Upland rice collection	10	4 varieties (240 kg seeds)
Planting fruit trees	15	660 seedlings
Cardamom	10	1500 seedlings



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2. Diversification of uplands

2.1 Pigeon pea

A promising income generation option with many difficulties in implementation

Constraints:

- Still cattle damages on Pp (sometimes from other villages)
- Low quality of inoculant (transportation problems)
- Disease in Viengxay district affects tested variety
- Pest damage on seeds (rats) or stick lack insect (ants, hornets)

2. Diversification of uplands

2.2 Cardamom

- Good market opportunity with high prices for Quangtum variety (350,000 to 390,000 LAK/dry kg in PGY in 2016)
- Protection of riparian forests
- Vigilance points:
  - Fragility of seedlings
  - Ensure good pollination

A suitable location for cardamom

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Main achievements in project activities

2. Diversification in the uplands

2.3 Fruit trees

- Very high demand from farmers to grow orange trees
- Opportunity to exploit makkao plantation or other shaded area for coffee an tea plantation
- Possibility to work with TSC on seedling provision
- Existing market opportunities and neighboring promising example

Orange trees near Vangseng (Phontong)

Vigilance points:

- Overflowing market with orange
- Need proper training for tree maintenance

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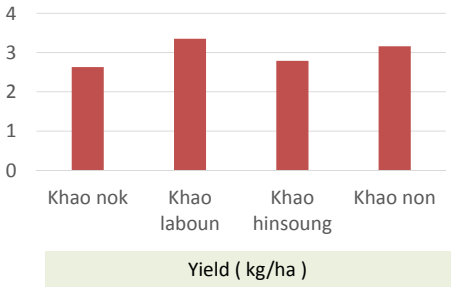
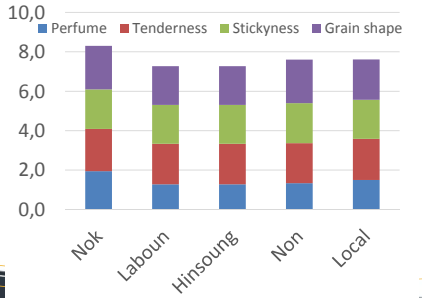
Main achievements in project activities

2. Diversification of uplands

2.4 Improved upland rice varieties



Yield (kg/ha)



2017 Strategy

Continuing the development diversification crops:

- Scale-up the development of perennial crops → Installing tree nurseries in the villages
- Increasing the number of household growing cardamom
- Rely on model households to improve diffusion of new crops
- Train farmers on management of fruit trees and other perennials

Overcoming pigeon pea issues:

- Continue species screening for pest resistance
- Putting more focus on crop protection (fencing, motor oil against ants)
- Encourage seed collection and consumption

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Main achievements
in project activities

3. Intensification of lowland cropping systems

- Objectives:
  - Flood protection embankments (gabions) → Protect existing paddy fields
  - Small agricultural equipment (motor pumps, water pipes) → improve irrigation facilities
  - SRI and winter crops → Intensification of lowland cropping systems
  - Compost and green manure →Management of soil fertility
  - Land certificate issuing → Secure land access and promoting sustainable intensification

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- Project realization:

Activity	Number of HHs involved (2015 – 2016)	Dimensioning
Flood protection embankments	(2017)	
Small agri. equipment (motor pumps, water pipes)	26	3 motor pumps
SRI	12	
Winter crops	75	
Compost and green manure	67	1300 kg compost
Paddy land registration	123	184 plots registered

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3. Intensification of lowland cropping systems

3.1 Protection against flooding in Napieng and Phounakang (New activity in 2017)

Stone embankments will be settled to prevent soil erosion by the stream

Last year Napieng farmers lost 5 000 m2 of paddy to the flood: high vulnerability to climatic events

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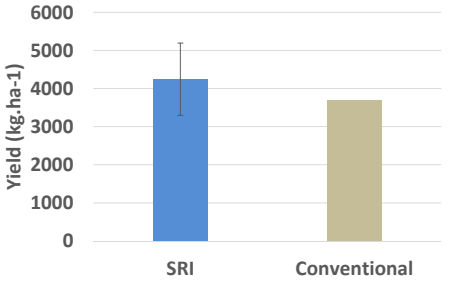
3. Intensification of lowland cropping systems

3.2 SRI

- Overall 17% better yields in tested plots
- But only 9 farmer in two villages
- Current constraints:
  - Problems of scale and timing generate rodent pressure
  - Inappropriate nursery techniques



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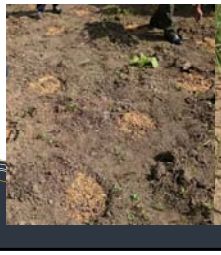
3. Intensification of lowland cropping systems

3.3 Dry season lowland vegetable production

- Good implementation demonstrated
- Good market output in Viengxay district
- Current constraints:
  - Labor intensive because of the need for fencing

	Number of Household 2016	Area 2016	Number of Household 2017	Area 2017
Napieng	15	3 400 m²	19	5 000 m²
Vangseng	14	m.d	4	2 400 m²
Houaymoun	17	5 000 m²	15	7 000 m²
Phounkang	12	8 000 m²	12	8 000 m²
TOTAL	58	16 000 m²	50	22 400 m²



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3. Intensification of lowland cropping systems

3.4 Land titling of lowland paddy area

- Objectives:
  - Long term management of soil fertility
  - Intensification of lowland cropping systems: SRI and winter crops
  - Initiate the idea of land based intensified farming activities (perennials)

	Vangseng	Phounkang	Houaymoun	Napieng
Number of households	10	36	37	48
Area registered	6.8 ha	29 ha	16.5 ha	31 ha

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Complementary approaches in 2017

- Model household approach
- Detailed survey on livestock management to develop scenarios with villagers based on modelling approaches

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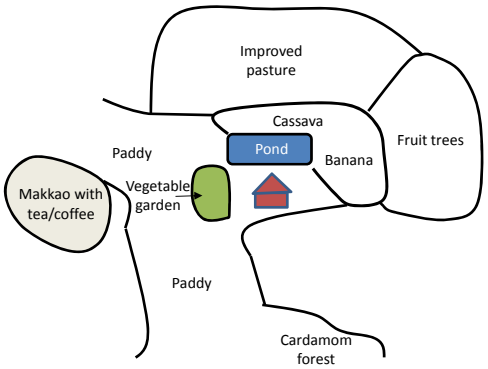
Phounkang model household

- Design of integrated activities with the farmer
- Provision of seeds + fencing material
- Close extension and monitoring during the year
- Objective: become a demonstration for all activities proposed in Phounkang



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Close monitoring of livestock activities

- Monitor changes in HH and village herd size
- Assess activities and functioning of livestock groups
- Mapping animal movements
- Monitor establishment and use of improved pastures

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