



Eco-Friendly Intensification and Climate resilient Agricultural Systems (EFICAS) project:
A landscape approach to agroecology

EFICAS evaluation meeting, May 30th 2018, Vientiane

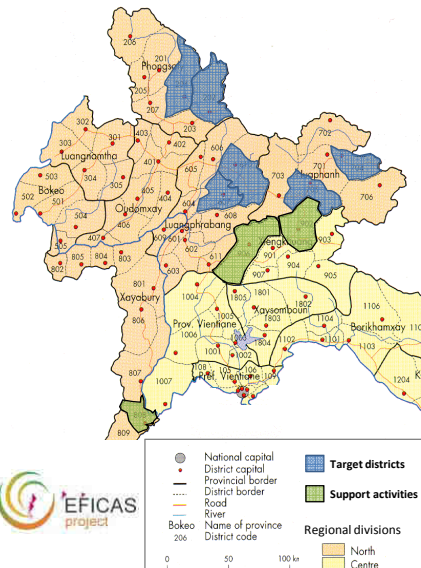
The project at a glance



- **4 years** (March 2014 - March 2018)
- Co-funding between
 - EU (**Global Climate Change Alliance - GCCA**)
 - AFD (**Northern Upland Development Program**)
 - CIRAD and MAF / DALaM
- Jointly implemented by DALaM and CIRAD
- Main objective: **Supporting the agro-ecological transition in the mountainous areas of northern Laos**
- Contribute to **CANSEA** and **ALiSEA** networks



5 provinces of intervention



Initiatives	Provinces	Districts	
Target areas	Houaphan	Viengxay	EU support
		Houamuang	
	Luang Prabang	Viengkham	
		Phakseng	
Phongsaly	Samphanh	AFD support	
	Mai		
Support activities	Sayabouri		Kenthao
	Xieng Khouang		Poukhoud,
		Kham	

2 intervention villages
2 control villages } per district

Background

An agrarian transition in northern Laos characterized by

- Rapid changes in agricultural production systems in line with:
 - an **increased access to markets** (coexistence of market-oriented and self-subsistence agricultural systems)
 - an **increased vulnerability of village communities** to climatic and economic fluctuations.
- Significant impacts on:
 - **natural resources**: reduced forest cover, degradation of agricultural land
 - **village communities**: overall poverty reduction but increased inequality and indebtedness
- Low adoption of agro-ecological innovations promoted by research and extension institutions

Challenges faced

Development

1. Make village communities of northern Laos more **resilient to external shocks** (climatic, economic)
2. Design and disseminate agricultural **production systems** that would be more **eco-friendly**
3. Make **agroecology visible on the map** / show that agroecology can be applied on a large scale

Scientific

1. How can **farmers** be more **involved** in the **innovation process**?
2. How (co-) **assess the performance and impact** of alternative production systems?
3. What **intervention mechanisms** to support the adoption and **widespread dissemination** of innovative practices?

Co-design and co-evaluation: the driving forces behind agro-ecological innovation



The expected results of EFICAS Project

▪ In NUDP target areas (3 provinces)

EU-component

- Engage village communities into eco-friendly and climate smart agricultural transitions that are visible at landscape level
- Empower local stakeholders (e.g. VLMC members) to engage in adaptive planning and implementation of local development pathways
- Strengthen GoL institutions in their capacity to implement landscape approaches to agroecology

▪ Outside NUDP area (support activities in Xkg and Saya)

- Document agrarian transitions in areas long engage in permanent commercial agriculture
- Understand the drivers of LU changes at landscape and household levels
- Identify “the windows of opportunity” for CA and agroecological innovations



Some lessons from the initial stages of the project

- The adoption and dissemination of agro-ecological practices is subject to **organizational constraints** and / or individual development strategies e.g.

Anticipate problems and negotiate solutions



Example 1. Animal free roaming

Animal free roaming is a major constraint to the adoption of agroecological practices, e.g. need to protect cover plants and crop residues in conservation agriculture.

The **regulation of animal roaming and the creation of livestock areas are necessary conditions** for the ecological intensification of cropping systems in sloping areas.

Example 2. Expansion of cultivated areas

The gain in productivity resulting from the adoption of technical innovations such as mechanization or the use of herbicides are generally reinvested into an expansion of cultivated areas, to the detriment of forests.

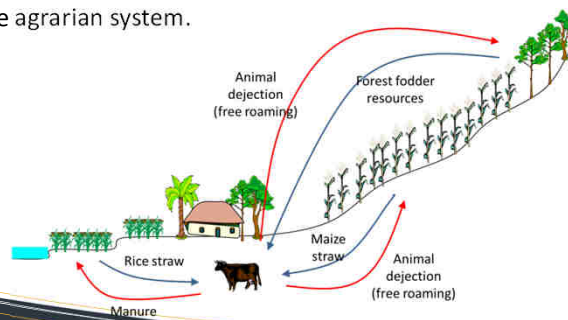
The **land use plans that define the agricultural and forest areas of the villages must be negotiated upstream** and respected by the farmers.



Some lessons from the initial stages of the project

Use territorial approach

- Any project concerned with the improvement of **cropping systems** should also focus on improving **livestock systems**, and on how **forest resources** are used and managed.
- A **territorial approach** is therefore an essential support for co-design because it integrates **spatial dynamics** and **interactions / flows between all the components** of the agrarian system.



Some lessons from the initial stages of the project

Involve other development stakeholders in the innovation process from the outset

- Agro-ecological transition is rarely the priority of village communities.
- Improved access to **water, electricity, health, education and / or safer agricultural outlets** are often perceived as more important and urgent by rural populations than agronomic and / or zootechnical problems.
- Whatever the project's R&D theme, the project must **take account of local priorities** and must play a facilitating role in finding appropriate solutions.
- This is a necessary condition for engaging village communities in planning dynamics that really **make sense** because they respond to perceived issues
 - The search for **common intervention with other projects**, for complementarities (agriculture, forestry, nutrition, transfer of scale etc.) are important elements of the long-term support of territorial projects



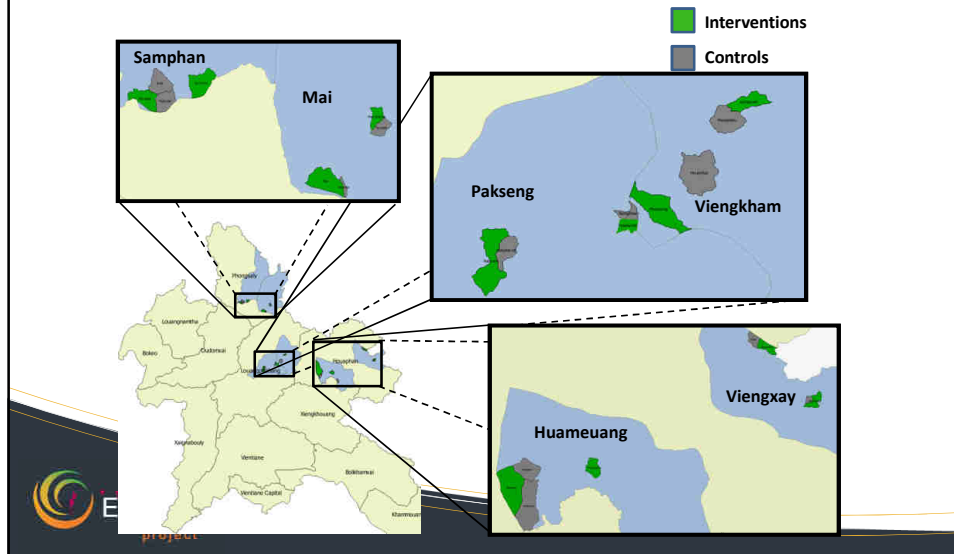
Project approach and intervention mechanisms (rational)

- Engaging the **whole village community** in integrated natural resource management instead of extension of single practices with pilot farmers



Project approach and intervention mechanisms (rationale)

- Initial investment in a **limited number of villages** to demonstrate efficiency of intervention mechanisms instead of spreading resources to many villages



Project approach and intervention mechanisms (rationale)

- Scaling-up and dissemination of innovative practices through **coordination mechanisms and partnerships** with multiple stakeholders (e.g. private sector, other GoL and NGOs initiatives)
- The private sector
 - Organic shade-grown coffee with Saffron in Phongsaly
 - Soybean with XP trading in Xieng Khouang and Luang Prabang
 - Stick lac with Agroforex and local traders in LPG and HP



Project approach and intervention mechanisms (rationale)

- Scaling-up and dissemination of innovative practices through **coordination mechanisms and partnerships** with multiple stakeholders (e.g. private sector, other GoL and NGOs initiatives)
- Other GoL and NGO initiatives
 - Lao Women Union: legume integration into traditional diet (cooking classes)
 - Agrisud: organic vegetable production, courses on Agroecology
 - GRET/ALiSEA: landscape approaches, indicators & performance assessment, common awareness events



Project intervention mechanisms (adaptive learning)

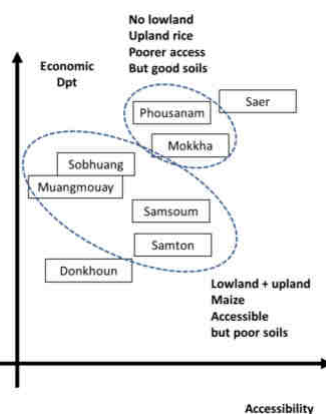
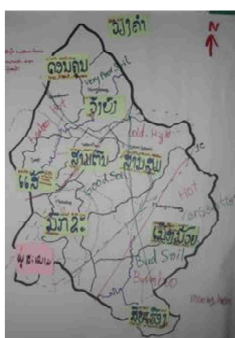
- Participatory village selection process
- Participatory planning (PLUP, CADPs)
- Support for risk-taking/ farmers on-farm experiments
- Support to capacity building (farmers – extension agents)
- Participatory assessment (outputs, outcome, impacts)



Participatory village selection process

- District level expert meeting (DAFO & DONRE staff)
 - Mapping agroecological diversity at district level
 - Expert typology of kumbans -> pre-selection of 3-4 target kumbans

Viengkham



Community-based Agricultural Development Plans (CADP)

Day 1. Opening meeting involving the whole village

- Introduction of the project team
- Presentation of the members of the Village Land Management Committee (VLMC)
- Objectives of the meeting and participatory process



Day 1-2. Data collection

- Socio-economic data collection (rapid survey of all village households)
- 4 Focus group discussions
 - Problem census (men / women)
 - Wood, wildlife and NTFP
 - Village population trends
 - Land use systems
- Land management and regulations (3D model, maps)



Day 3-4. Activity planning with VLMC

- Discussion on innovative practices
- Land management rules, indicators
- Field visits, site selection, volunteer households



Day 4. Closing meeting involving the whole village

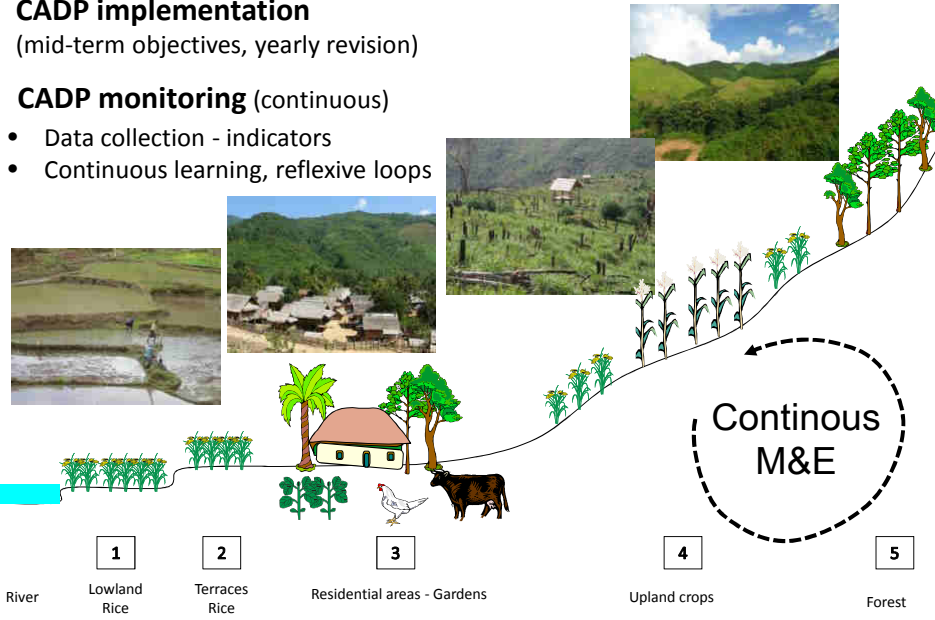
Community-based Agricultural Development Plans (CADP)

CADP implementation

(mid-term objectives, yearly revision)

CADP monitoring (continuous)

- Data collection - indicators
- Continuous learning, reflexive loops



Community-based Agricultural Development Plans (CADP)

an action plan that includes experiments, demonstration and training activities adjusted to each local context & revised yearly

Phoutong Village

Viengkham district, Luangprabang province



1. INTEGRATED APPROACH TO LIVESTOCK SYSTEM IMPROVEMENT

Living fences and forage production

Set up livestock area with permanent living fences (combination of barbed wire and trees) 6.5 ha in 2015 involved 77 HH. In 2016, expand to additional 7 ha.

Training on forage management

30 people took part in the training to produce silage, hay, and feeding boxes.



2. SUSTAINABLE CROPPING SYSTEMS IN THE UPLANDS

Intercropping systems maize/rice with pigeon pea

Introduction of pigeon pea (for stick-lack production) in association with upland rice and maize, 9 households (HH) and 8 ha in 2015. 11 additional HH in 2016.



3. AGRICULTURAL INTENSIFICATION AND DIVERSIFICATION

Intercropping cassava and stylosanthes

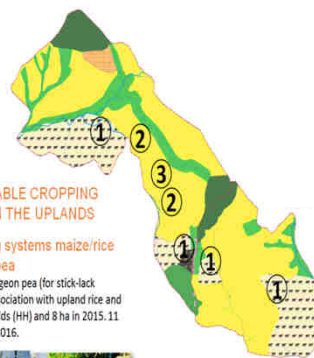


Control of rodent damages

The project provided 400 metal traps in 2016

Rice bank for food security

The project provided 2 tons of rice for the village rice bank in addition to villagers' contribution in 2016.



Support to capacity building

Producers

- **Learning by-doing** (~650 farmers) with guaranteed failure risk
- **Learning by copying** (~170 farmers): study tours and peer-to-peers exchanges with farmers from other villages
- **Technical training** (~1770 participants) on various technical subjects e.g. on animal health, forage technologies, improved fallows, compost production, seeds conservation etc.
- Valorization of **local champions** (stick lac, SRI, cooking classes etc.)
- **Model farmers** (18) as an alternative to Farmers Field Schools (FFS)



Support to capacity building

Village Land Management Committee (VLMC) members

- Budget to support the M&E of CADP activities (~ 400 USD/ year/ VLMC)
- Involvement in the collective planning and assessment,
- Scenarios exploration (simulation games)



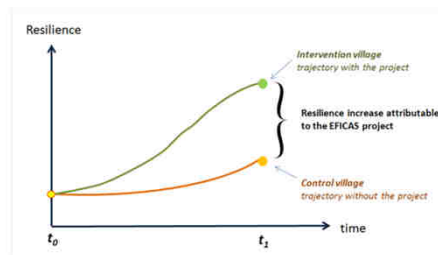
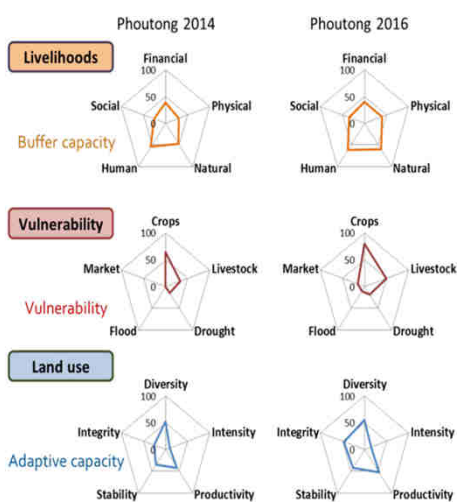
Support to capacity building

Extension agents

- **Learning-by-doing:** participatory landscape approaches (negotiation of PLUPs); negotiation, annual review and adaptation of CADPs; eco-friendly innovations
- 12 extension agents and DALaM staffs participated to the set-up and facilitation of **senarii exploration** with farmers
- **Formal training:** 928 men.days of thematic training on e.g. GPS/remote sensing data management, agroecology practices, impact assessment, video shooting, drone piloting, questionnaires build-up and surveys using tablets
- **Study tour** within Laos (cross-exchanges) and in neighboring countries (Thailand, Cambodia)



Participatory assessment of impacts



Take home messages

- Research project (method development component) with development objectives (out-scaling of eco-friendly innovations)
- Deliberate choice to engage with few villages with permanent presence (1 extension agent per village) and long-term commitment
- Impact analysis in terms of empowerment of local communities (beyond simple number of beneficiaries)

Thank you for your attention...

For more information:

www.eficas-laos.net

