Eco-Friendly Intensification and Climate resilient Agricultural Systems (EFICAS) project:

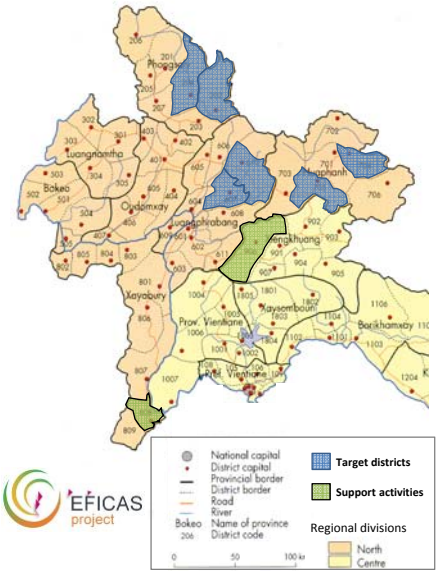
A landscape approach to agroecology

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

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
		Houamuang
	Luang Prabang	Viengkham
		Phakseng
	Phongsaly	Samphanh
		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	Scientific
1. Make village communities of northern Laos more **resilient to external shocks** (climatic, economic)	1. How can f**armers** be more **involved** in the **innovation process**?
2. Design and disseminate agricultural **production systems** that would be more **eco-friendly**	2. How (co-) **assess the performance and impact** of alternative production systems?
3. Make **agroecology visible on the map** / show that agroecology can be applied on a large scale	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

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The expected results of EFICAS Project

- **In NUDP target areas (3 provinces)**
  - 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

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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.

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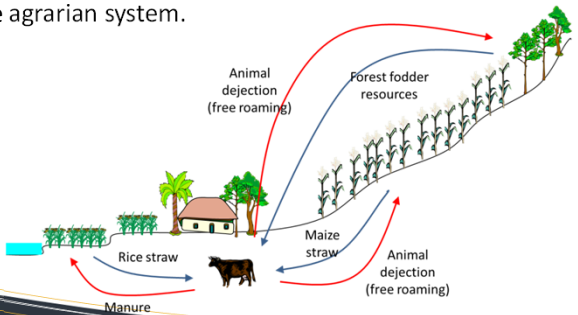
Some lessons from the initial stages of the project

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.



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Some lessons from the initial stages of the project

Involve all 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

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Project main achievements so far

Objective 1: Increase the involvement of village communities in sustainable land management

- **Participatory planning and management of village territories**
  - Revision of Participatory Land Use Plans (**PLUPs**) or negotiation of first PLUPs,
  - Extension of these PLUPs into Community Agricultural Development Plans (**CADPs**), setting medium-term objectives and indicators of achievement (2017) and sharing of responsibilities between actors,
  - **Annual review and adaptation** of CADP plans
- **Capacity Building for Village Land Management Committees (VLMC)**
  - **Empowerment** of the members of the committee through the establishment of a budget and support for the monitoring and evaluation of field activities,
  - **Exploration** with VLMC members of scenarios aimed at reducing vulnerability to external shocks (e.g. climate change, price fluctuations)

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Project main achievements so far

Objective 2: Supporting the ecological intensification of agriculture

- **Rearrangement of crop-livestock interactions**

  "To spatially dissociate the cropping activities from the livestock activities in order to better re-associated them thereafter"

  - **Landscape units identification and protection**: financial support for the permanent fencing of crop and livestock areas as defined in the PLUPs / CADPs,
  - **Intensification of animal feeding systems**: support for the establishment and management of improved pasture,
  - **Support for the improvement of animal health:** awareness raising and training of village veterinary workers, establishment of revolving fund for animal health, and special funds for the poorest families




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Project main achievements so far

Objective 2: Supporting the ecological intensification of agriculture

- **Development and promotion of multi-cropping systems incorporating legumes**

"Maintain soil fertility while improving the nutritional status of populations"

- Promotion of **inter and relay cropping systems** (e.g. with pigeon pea, red bean, soybean, groundnut)
- Support for the **valorization of** these **secondary crops:** stick lac production, sensitization for the integration of these legumes into traditional food systems,
- Training for a **better conservation of legume seeds**




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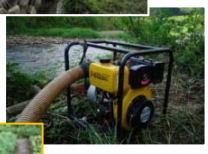
Project main achievements so far

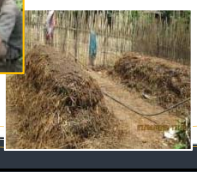
Objective 2: Supporting the ecological intensification of agriculture

- **Expansion and intensification of lowland paddy rice fields**

« Lowland paddy fields as farmers' priority investment»

- Protection of rice terraces against floods and river erosion (**bank reinforcement**)
- Improved access to **small-scale irrigation** to increase the number of growing cycles (i.e. rice or spring corn and winter vegetables)
- Promotion of **alternative cultivation techniques**: SRI, compost, varietal improvement (i.e. pure seed, testing of varietal rice collections)

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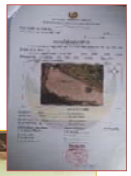
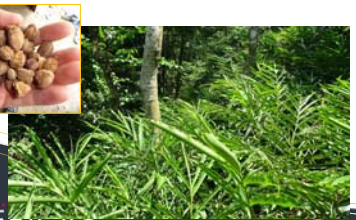
Project main achievements so far

Objective 2: Supporting the ecological intensification of agriculture

- **Sustainable management of agricultural land**
  - **Protection of riparian forests** through the promotion of cardamom-based agroforestry systems,
  - **Facilitation of contractual commitments** between private companies and farmer groups for coffee and soybean production,
  - **Land security:** Lowland paddy land registration to facilitate farmers' engagement into soil fertility sustainable management.



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Thank you for your attention…

For more information:

www.eficas-laos.net

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