

# Community-based Agricultural Development Planning (CADP)

Engaging farming  
communities into  
participatory  
land use planning





EFICAS Know-How Series

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Engaging farming communities into  
participatory land use planning

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## Introduction: from land use planning to action planning



An emphasis was given over the past decade to participatory land use planning (PLUP), with strong policy support, development of methods and tools. Land use planning has gradually improved with increased farming communities participation and ownership of the planning process, and improved techniques for data collection and mapping. Initial participatory diagnostic usually includes an inventory and prioritization of village problems, a description of village history and demography, the identification of farming practices, of constraints to local development, as well as technical and organizational levers to improve systems performance.

Unfortunately, the PLUP process usually ends with a PLUP report and map set at the entrance of the village, whereas it should be the starting point towards the effective implementation of the plan. Land use planning is not only about supporting the initial diagnosis but also about supporting the implementation of a collectively-agreed territorial plan, which still remains a challenge.

Over the past 5 years, the Eco-Friendly Intensification and Climate-resilient Agricultural Systems (EFICAS) project has been working on how to translate these PLUP into action plans and notably into Community-based Agricultural Development Plans (CADPs).

A CADP is an action plan: 1) that engages the whole village over several years, 2) that is negotiated and implemented by the village community and district extension agents together, 3) that (hopefully) receives the support of multiple partners/projects for implementation, and 4) that provide clear indicators to monitoring implementation and impacts. This is an adaptive learning process in which the planning, implementation and monitoring activities are highly inter-related.

This manual aims to provide to field practitioners basic information and tips on how to plan, implement, and monitor a CADP.

**The EFICAS team**

## Quick reminder

### What is a Participatory Land Use Planning (PLUP)<sup>1</sup>?

**A PLUP** describes the process of Land Use Planning at village and village cluster levels with the active participation of villagers. The PLUP process includes nine stages<sup>2</sup>, which guide the implementing teams:

1. Planning preparation
2. Socio-economic data collection (village and household levels)
3. Village and cluster village boundaries delineation
4. Village land use zoning
5. Village land management planning
6. Land data and digital map recording
7. Land registration
8. Villages networking (village cluster level)
9. Monitoring and evaluation

However, the on-the-ground implementation of PLUP commonly only comprises stages 1 to 5.

### What is Village Land and Forest Management Committee (VLMC)?

Ten to twelve villagers are selected with the approval of the whole village to be members of the VLMC. These villagers take part in all the activities organized for the planning process. The rationale for the selection of 10-12 VLMC members is that this number allows for the inclusion of villagers with different of social backgrounds and responsibilities without making the negotiation and deliberation processes with larger numbers too difficult or slow. Special attention is paid to the gender balance, ethnic groups, age groups and social status in the VLMC membership. Enough time should be allowed for the village negotiation leading to the selection of committee members as this committee has a very important role during and after the land use planning process.

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<sup>1</sup>Manual on participatory agriculture and forest land use planning at village and village cluster levels, 2009. Ministry of Agriculture and Forestry and National Land Management Authority, Vientiane.

<sup>2</sup>NAFRI 2012. Handbook on Participatory Land Use Planning. Methods and tools developed and tested in Viengkham District, Luang Prabang Province. NAFRI-IRD-CIFOR, Vientiane, Lao PDR. [http://asia-uplands.org/Catch-Up/pdf/2012\\_PLUP\\_Brochure\\_Viengkham.pdf](http://asia-uplands.org/Catch-Up/pdf/2012_PLUP_Brochure_Viengkham.pdf)





PART

# 1

## Initial CADP Planning

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## 1.1. Organization of the 4-days initial planning process

As it was found difficult to mobilize a whole farming community during more than 5 continuous days, CADP initial planning was scheduled on a 4-day basis with day-by-day activities as follow:

### Day-by-day activities during initial CADP planning

#### 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 planning of the week

#### Day 1-2. Data collection

- Focus group discussions
  - \* Village history
  - \* Village infrastructures and institutions
  - \* Village population trends
  - \* Problem census (men / women)
  - \* Land use systems (crops, livestock, forest resources)
  - \* Sales and contracts
- Household surveys
- 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

- Presentation by the VLMC members of CADP plan and activities for Year 1
- Presentation of tentative budget for Year 1



## BEFORE STARTING

When you first arrive in the village, different points have to be discussed with the village-head :

- Present the week schedule and explain every activity that will be implemented. According to the villagers constraints (agricultural activities, celebrations ...), you may have to adapt the week schedule. Moving some focus groups in the evening can be an option.
- For the focus groups, the village-head can help convoke participants. Give him the criteria for participants to each focus group, and ask him to prepare a list of villagers for each focus group and convoke them.
- Ask the village-head to provide you with a list of all the households (HH) in the village. Then randomly select 30 HH for the detailed survey. It might be useful to give this list of 30 household to the village-head, so that he can inform them that they will be surveyed during the 4-days.
- Ask the village-head what are the main 4 crops grown in the village, apart from rice. Use the information to adjust the questionnaire Rapid Survey



## DATA COLLECTION

Two teams are set-up to conduct the different focus group and individual surveys. At least two persons are needed in each focus group, one for facilitating discussions, and one for computing data.

All questionnaires are available at: <https://www.eficas-laos.net/publications/baseline-material>

Group interviews	Description
Village history	About 10 persons, including members of the elder committee who are knowledgeable about the history of the village
General Information	Village head, and any other villager likely to provide the needed information: deputy head, teachers, members of elder-committee, etc.
Problem census Women	10 to 12 women, of all categories (young, old, rich, poor, etc.)
Problem census Men	10 to 12 men, of all categories (young, old, rich, poor, etc.)
Cropping systems	About 15 farmers (men & women) as diverse as possible: rich, poor, people growing cash crops, big & small households, people hiring labor-force, etc.
Livestock systems	About 15 farmers (men and women) all raising at least one animal species: buffaloes, cows, pigs or goats.
Sales & Contracts	10 to 15 villagers, who sell (or used to sell) some production: cash crop, animals, NTFPs, etc.
Individual survey	Description
Rapid survey	All village households are surveyed.
Detailed Survey	30 households. The list of these 30 households has to be random: random selection from village head's list of all the HH in the village.



## DAILY ORGANIZATION

### D1 Opening village meeting

Team 1&2

- Introduction of the project team
- Presentation of the members of the VLMC
- Objectives of the meeting and activities that will take place in the village



### D1 Data collection

Team 1

#### Focus group discussions

- Problem census: villagers are asked to describe and rank the problems they are facing in their daily life, and the opportunities they see to overcome these problems. Men and women work in two separate groups, as the problems identified are often different.
- Wood, wildlife and non-timber forest products (NTFP) location and relative abundance  
List of the different forest products that are collected in the village, quantity collected and usage.
- Village population trends  
Population, births, mortality, number of persons that move in and move out are collected for the past 5-10 years to define population trends.





**Example: Problems identified and ranked by women in Houaymoun village (Houaphanh province, 2015)**

Rank	Problems	Causes	Effects	Solutions
1	water for domestic consumption is not sufficient	location of village is higher than water sources	water not enough for drinking and using in everyday life	looking for new water sources
2	paddy lacks of water	no pipes irrigate water to the paddy rice fields	not enough water and poor productions	finding pipes or creating irrigation that could extend paddy areas
3	no extra job	no fund	low incomes	want to have budget fund for women (weaving group)
4	animals damaged crops	no livestock areas	productions are damaged	want to have livestock areas, especially the owners of animals must take care well their animals
5	livestock diseases (pig, poultry and goats)	livestock has no vaccination	animals died, lost fund	providing training program as well as have provide medicine cabinet to village
6	Poor productions	due to two-year young fallows	work but not worthy	want to expand land for shifting cultivation and improve the quality of soil
7	Poor productions	late rain seasons	not good productions & work a lot but get little	look for new technical methods and also new varieties

## D1 Household surveys

### Team 2

- Village socio-economic data and land tenure analysis



## D2 Participatory mapping

### Team 1

Use of locally-produced 3D model<sup>3</sup> or projected Google earth 3D maps: the objective is to determine the Village boundary delineation and to characterize and map the different village land use systems (e.g. paddy fields, forest areas, rotational crops, plantations etc.).



## D2 Focus group discussions

### Team 2

Cropping and livestock systems analysis

List of the different crops grown and livestock raised in the village. The 3 main cropping and livestock systems are detailed: operations, calendar, species/varieties etc.

Input – output parameters

Inputs (e.g. seeds, labor, fertilizers, pesticides) and outputs (productivity, product use, farm gate prices) are discussed for the main cropping and livestock systems

**Example** Group description on upland rice activities, calendar, and labor requirements in Naphieng village (Phongsaly province, 2016)

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Labor (Men.day)
Area selection													2
Land clearing													30
Burning													2
Collect unburned wood & reburn													20
Sowing													15
Weeding 1													60
Weeding 2													40
Harvest													25
Rice pilling in the field													15
Threshing													20
Transport													30
<b>Total</b>													<b>259</b>

<sup>3</sup> Method to make a 3D map with villagers is detailed in the 2012 PLUP Handbook: [http://asia-uplands.org/Catch-Up/pdf/2012\\_PLUP\\_Brochure\\_Viengkham.pdf](http://asia-uplands.org/Catch-Up/pdf/2012_PLUP_Brochure_Viengkham.pdf)



## D3 Data collection and field visits

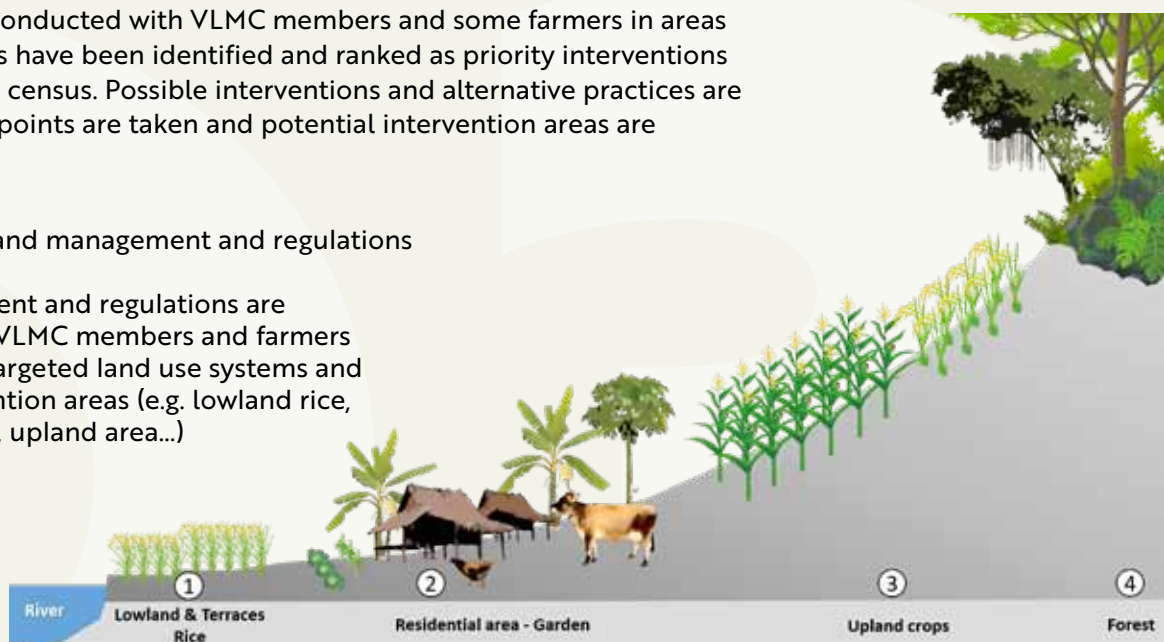
### Team 1

- Field visits, activity planning

Field visits are conducted with VLMC members and some farmers in areas where problems have been identified and ranked as priority interventions during problem census. Possible interventions and alternative practices are discussed. GPS points are taken and potential intervention areas are measured.

- Focus group: land management and regulations

Land management and regulations are discussed with VLMC members and farmers concerned by targeted land use systems and priority intervention areas (e.g. lowland rice, residential area, upland area...)



### Team 2

- Field visits, activity planning

- Focus group: Discussions on traditional and innovative agricultural practices with VLMC members and farmers from the identified intervention areas.









## 1.2 Negotiate agroecological options

### **Diversity as basic principle for action**

The capacity of the overall farming system to resist or recover from shocks, either economic or environmental, is enhanced by the diversity of production portfolio, the use and combination of various agroecology practices, and the integration of multiple income generating activities.

### **Different agroecological options according to landscape units**

Different eco-friendly technologies have been identified according to the different compartments of the landscape.

The objective is not to promote a specific technology but to propose, discuss and adapt a combination of options (technical and/or organizational) according to priorities set by the village community, identified synergies (e.g. crop-livestock-tree, lowland-uplands), local actors willingness and capacity to innovate.

Three key areas of intervention are detailed here after that emerged as key entry points during EFICAS-facilitated CADP planning and implementation process i.e.:

- Lowland paddy expansion and intensification
- Integrated approach to improved livestock systems
- Agroforestry systems in the uplands

## Lowland paddy expansion and intensification

### « Lowland paddy fields as farmers' priority investment »

- Number one request from villagers: the expansion and/or protection of lowland paddy fields, the improved access to irrigation for paddy fields are the first request from village communities with existing lowland paddy fields.
- Farmers' priority investment: wherever and whenever possible, farmers invest into paddy terracing.
- A key element towards shifting cultivation stabilization: There is a significant negative correlation between (lowland) paddy production and upland rice production; supporting the increase in paddy rice production (through area expansion and productivity improvement) might lead to a decrease in upland shifting cultivation.
- A key element towards poverty eradication: there is a significant positive correlation between paddy production and household wealth.

Different technologies to be discussed and adapted with farmers include:

- Protection of paddy rice terraces against floods and river erosion (bank reinforcement using gabions e.g. wire net and stones);
- Improved access to small-scale irrigation to limit water shortage stress during the rainy season and increase the number of crop cycles;
- Support to lowland dry season diversification and intensification;
- Promotion of alternative cultivation techniques e.g. direct seeding of rice or cover crops, system of Rice Intensification (SRI), compost production...
- Testing of new rice varieties.







Bank reinforcement



Water pump for small-scale irrigation



Compost production



Rice-Duck system



Lowland dry season diversification: Garlic on rice straw residues

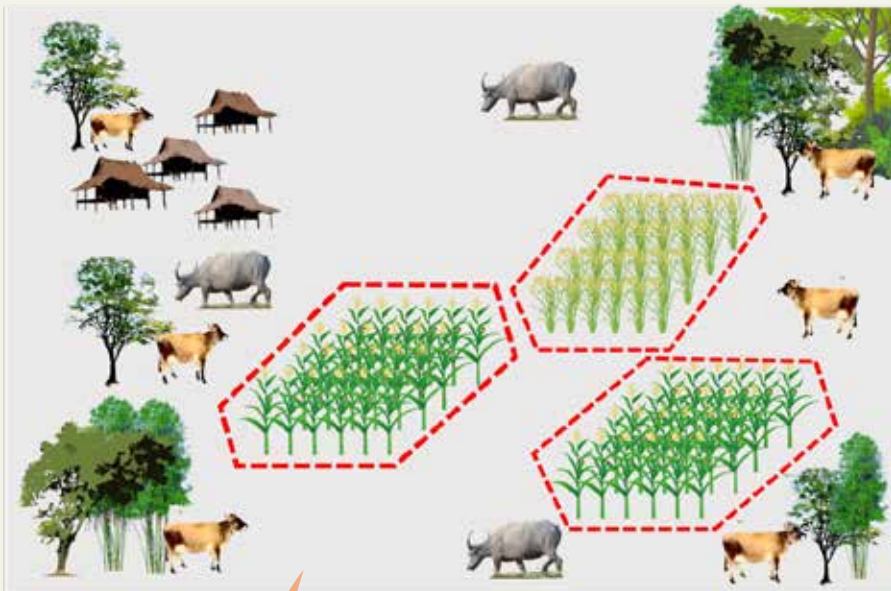


## Integrated approach to improved livestock systems

***“We are not raising animals but animals are raising us”***

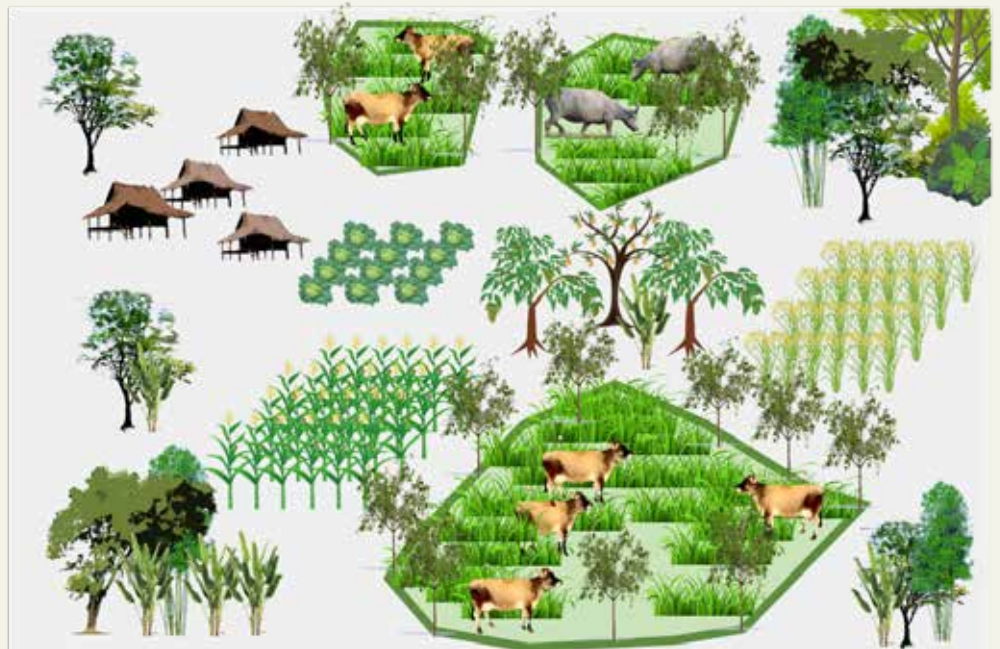
This popular saying in northern uplands emphasizes the high amount of family labor invested in temporary /yearly fencing of annual crops to prevent crop damages by roaming animals.

There is therefore a need to re-arrange crop-livestock interactions by disconnecting (temporarily) crop and livestock activities for the sustainable intensification of both systems then reconnection under a new system.



**From temporary  
fencing of cultivated  
area...**

**To permanent  
fencing of  
livestock areas**





Livestock systems improvement relies on four inter-related pillars:

1

Better control of animal roaming by installing permanent fencing of livestock areas



2

Invest in animal health



3

Increase fodder quantity and quality



4

Provide shelter and water



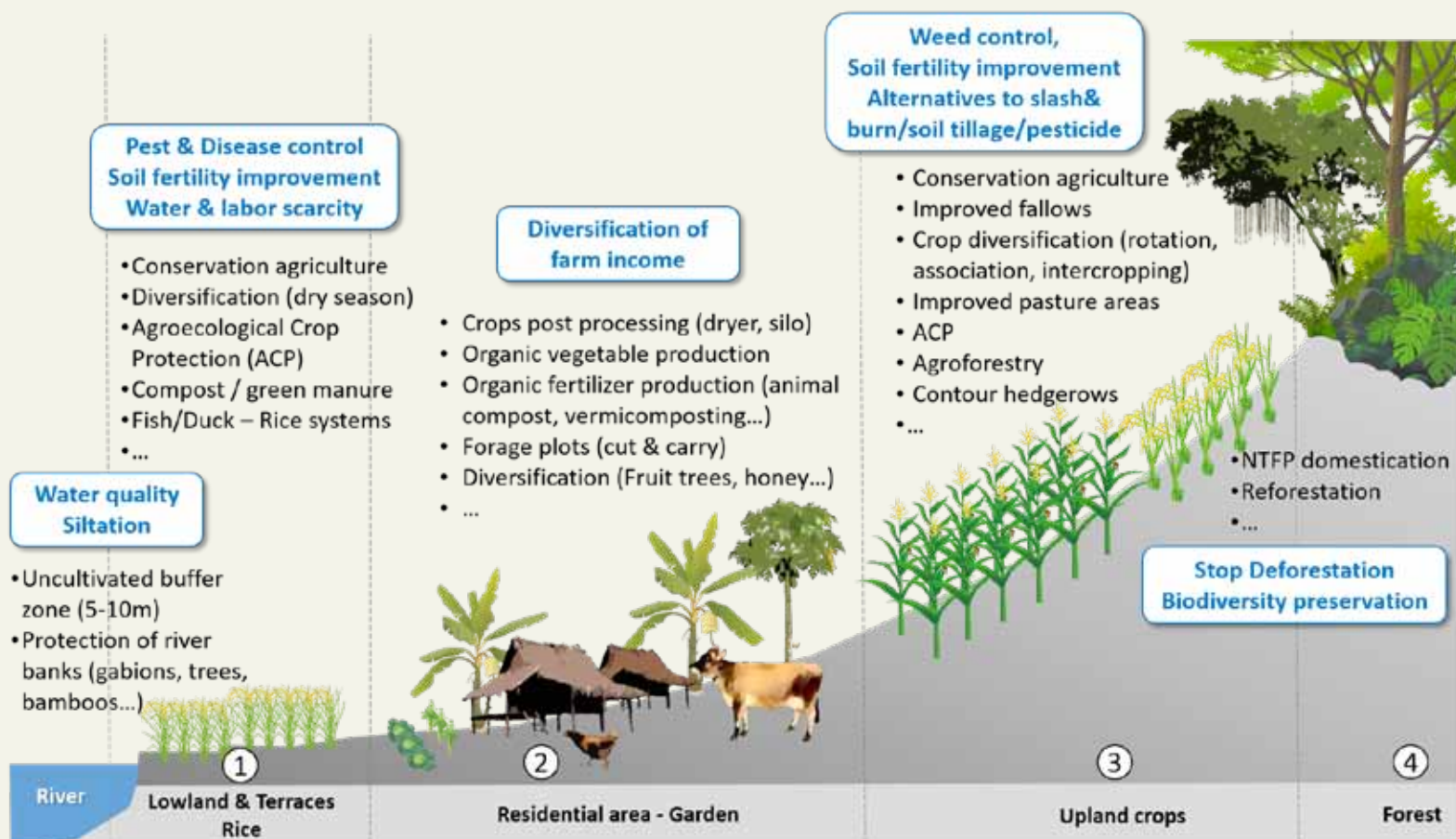


## Agroforestry systems in the uplands

Opportunities for developing agroforestry-based systems with high-value products e.g. coffee, cardamom, rattan, bananas etc.



To summarize, combine eco-friendly technologies according to local specificities of landscape units



## 1.3 Anticipate problems and negotiate solutions

The adoption and dissemination of agro-ecological practices is subject to organizational constraints and/or individual development strategies which are already well known. These problems must be anticipated/discussed and solutions (i.e. specific activities to be implemented, control procedures, penalties and interest raising mechanisms...) have to be negotiated with the whole village community before the implementation of the activities.

### ***Example 1. Animal free roaming***

Animal free roaming is a major constraint to the adoption of agroecological practices, e.g. need to protect trees in agroforestry systems or plantations, relay crops, or 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 with the farmers.

Penalties related to potential deviant behaviors (e.g. opening of cultivated plots on protected forest areas, crop damage related to the roaming of domestic animals despite the adoption of collective rules, etc.) must be discussed with and defined by the farmers.





## 1.4 Engage service providers and local enterprises



Market opportunities are major driver of land use and farming systems change. Variability in prices, non-respect of contracts (e.g. price, quantity, and payment modalities) are challenges farmers have to deal with.

Engaging local actors from the private sector (e.g. local traders and service providers, locally-established small and medium enterprises) at the early stage of the land use planning process helps designing land-use plans that incorporate the needs from value chains and private operators (it is important they feel part of the plans and not outsiders). It also helps building mutual trust between producers and the traders/enterprises which is a key towards fairer value chains development.

A mapping of local enterprises, traders, and service providers (commune/ district/ province) is needed before PLUP and CADP implementation

## 1.5 Be transparent and flexible regarding the use of project support funds

Sustainable agriculture 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 agriculture-related problems.

Whatever the project's thematic entry point, it must be clear (support funds available, eligible and non-eligible expenses), transparent and flexible regarding funds allocation, and take into account as much as possible local priorities.

If fund request are non-eligible, project must play a facilitating role in finding appropriate solutions with other partners.

This is a necessary condition for engaging village communities in planning dynamics that really make sense because they respond to perceived issues.





**Example 1: Project support for a permanent market in Samsoum village, Viengkham district, Luang Prabang province**

The co-funding of a permanent cement-based market can appear little related with project objectives (eco-friendly intensification, climate-resilient agricultural systems) but was a strong request from farmers; the permanent market allowed a sharp increase in vegetable local sales and largely contributed to improve farmers income and village community buffer capacity to external shocks.



**Example 2: Project support for locally built ovens in Phia village, Mai district, Phongsaly province**

A bit far from farming system ecological intensification but strong impact on cardamom selling price (wet vs dry) and cardamom-related generated incomes.



## ► 1.6 Start small and then expand

Prefer an initial investment in a limited number of villages to demonstrate the efficiency of intervention mechanisms and build the capacity of extension agents (notably regarding the facilitation of innovation processes), and then expand progressively instead of spreading resources to many villages from the beginning.



PART

# CADP Implementation



## 2.1 Support collective and individual actions

It is important to identify, discuss, and clearly define with village communities which activity should be implemented and managed collectively vs. individually. If some actions make sense being implemented collectively (e.g. set-up of collective stall, warehouse or conservation area), the management of others activities (e.g. maintenance of a forage plot) might be more efficient if managed individually.



## 2.2 Support the fencing of production and livestock areas

As stated before, freely roaming domestic animals is a major constraint to the adoption of innovative cropping systems based on agroforestry, relay cropping, or improved fallows. The negotiation of new regulations regarding animal roaming and the creation of livestock areas are necessary conditions for the ecological intensification of both cropping and livestock systems.

They are necessary but not sufficient. The permanent fencing of agricultural landscape units combining various means and material (wood/bamboo, barbed wire; plant cuttings/seedlings) is also necessary especially during the early stage of crop-livestock interactions reorganization.

This remains challenging due to the cost of fencing, the risk of land grabbing, and the tensions fences can raise within the community and with neighboring communities.



## 2.3 Support risk-taking and farmers own experiments

Innovation is about risk-taking. It is important to secure farmers in testing eco-friendly innovations by guarantying them failure risk (e.g. financial compensation in case of failure) through comparison between conventional vs innovative systems and/or year  $n$  with year  $n-1$ . In addition, learning by-experimenting still remains the best learning process for farmers.

## 2.4 Use “funny” methods and tools for capacity building

Learning should be fun and participatory. Participatory tools such as role game playing and/or forum theater are valuable and funny ways to collectively discuss issues and explore solutions. Role game playing is also a good way to build the facilitation capacities of extension agents and turn them from lessons givers to facilitators of innovation processes.





## 2.5 Encourage the emergence of champions and the empowerment of local institutions



Village land management committees (VLMC) in charge of facilitating the land use plans implementation should be set-up taking stock (and incorporating) of existing institutions (e.g. village direction unit, women union, youth union, elder union etc.).

A dedicated budget should be proposed to the VLMC committee to facilitate the planning and monitoring of activities (e.g. daily allowances for M&E activities), and empower its members through budget planning and management. Local champions should be valorized through peer-to-peer exchanges and training activities.



PART

# 03

**CADP  
Monitoring**





### 3.1 Engage village communities in the M&E of activities



Farmers' participation is not limited to the planning process and/or the implementation of grass roots activities.

Farmers should play a key role in the definition of the indicators used to assess the performance of the innovation.

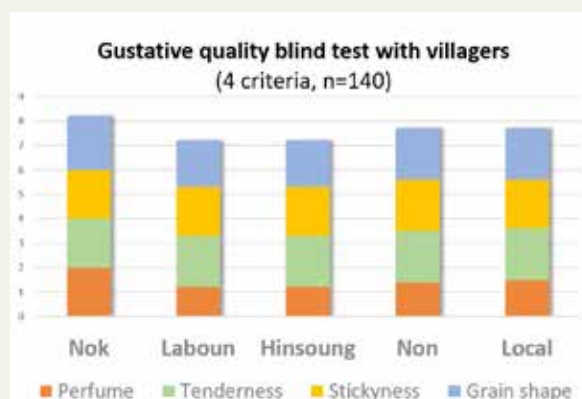
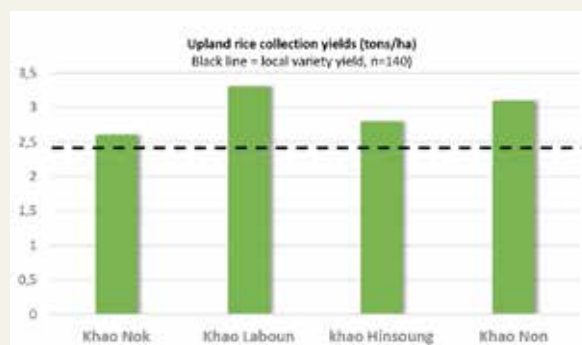
They should be engaged in the monitoring and evaluation of the activities, and the presentation of results to the whole community.

### 3.2 Monitoring performance and implementation gaps

Farmers must be associated to the monitoring of innovations performance based on criteria and indicators that were defined during the planning process.

These assessment can be quantitative (e.g. changes in yields, resource availability, animal vaccination rates etc.) but also qualitative (cost-benefits analysis).

A good starting point is the analysis of implementation gaps: what was initially scheduled during the planning, what was really implemented, and the reasons for the potential difference between the two.



### 3.3 Participation and integration



It is important to monitor who is participating, who is speaking, and who is engaging into the planning and the implementation of activities.

It is also important to identify who is not participating to the process and see with village land management committee what could be done to improve the participation.

### 3.4 Revise regularly the land use plans

Plans must be renegotiated regularly by the whole community to adjust to unpredictable events (e.g. extreme weather conditions, locust attacks, new crop opportunity) deviant behaviors from initial plans (e.g. crop damages due to roaming animals despite agreement on livestock movement regulations), evolving local policies (e.g. promotion of livestock market).







## 3.5 Support a 2-step PLUP validation process

The real negotiations on land use plans begin once resources are made available to implement the plan. The project experienced several re-location of livestock areas once we agreed farmers plan to develop livestock facilities (e.g. fences, stalls, water reservoir etc.) in these areas that became then "too far from village", "too close from neighboring village", or with "not enough water for animals" etc.

Land use plans should therefore follow a 2-step validation process; a first-step of simple non-objection from agricultural services that would confirm that planned land cover and land use are in line with local policies (e.g. percentage of forest cover, relative importance of crop and livestock areas); a second step of formal validation, only once the plan would have been implemented for at least two years.







The Eco-Friendly Intensification and Climate-resilient Agricultural Systems (EFICAS) project was an action-research project jointly implemented by CIRAD (Centre de coopération Internationale en Recherche Agronomique pour le Développement) and DALaM (Department of Agricultural Land Management under Ministry of Agriculture and Forestry of Lao PDR) and co-funded by The French Development Agency (AFD) and the European Union (EU) from 2014 to 2019.

The EFICAS project aimed to engage farming communities into the participatory design of agro-ecological alternatives for sustainable agricultural intensification in the mountainous provinces of northern Laos. Over the past 5 years, the project has been working on how to translate the participatory land use planning (PLUP) into action plans and notably into Community-based Agricultural Development Plans (CADPs) which is an adaptive learning process.

This manual - from the EFICAS Know-How Series - aims to provide to field practitioners basic information and tips on how successfully plan, implement, and monitor a CADP.

More information at: [www.eficas-laos.net](http://www.eficas-laos.net)

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