



NUDP2.2 National Steering Committee SARI & EFICAS Components

— 2018-2019 Highlights —

GENERAL OBJECTIVE

To demonstrate benefits of agro-ecological approaches and integrated watershed management as an integral part of capacity development for successful operation and maintenance of small village infrastructure and the sustainability of rural livelihoods.





SPECIFIC OBJECTIVES

- **SARI component**

- Sustainable O&M of the current SARI infrastructures
- Climate-resilient infrastructure through bio-engineering/watershed conservation techniques

- **EFICAS component**

- Completion of the program of innovations (technical, organizational & institutional)
- Capacity development of PAFOs and DAFOs,
- Modelling and evaluation for learning and up-scaling.

BOTH components: improved coordination between the two components, joint implementation in key thematic areas in the 6 pilot villages, and comprehensive documentation and capitalization.

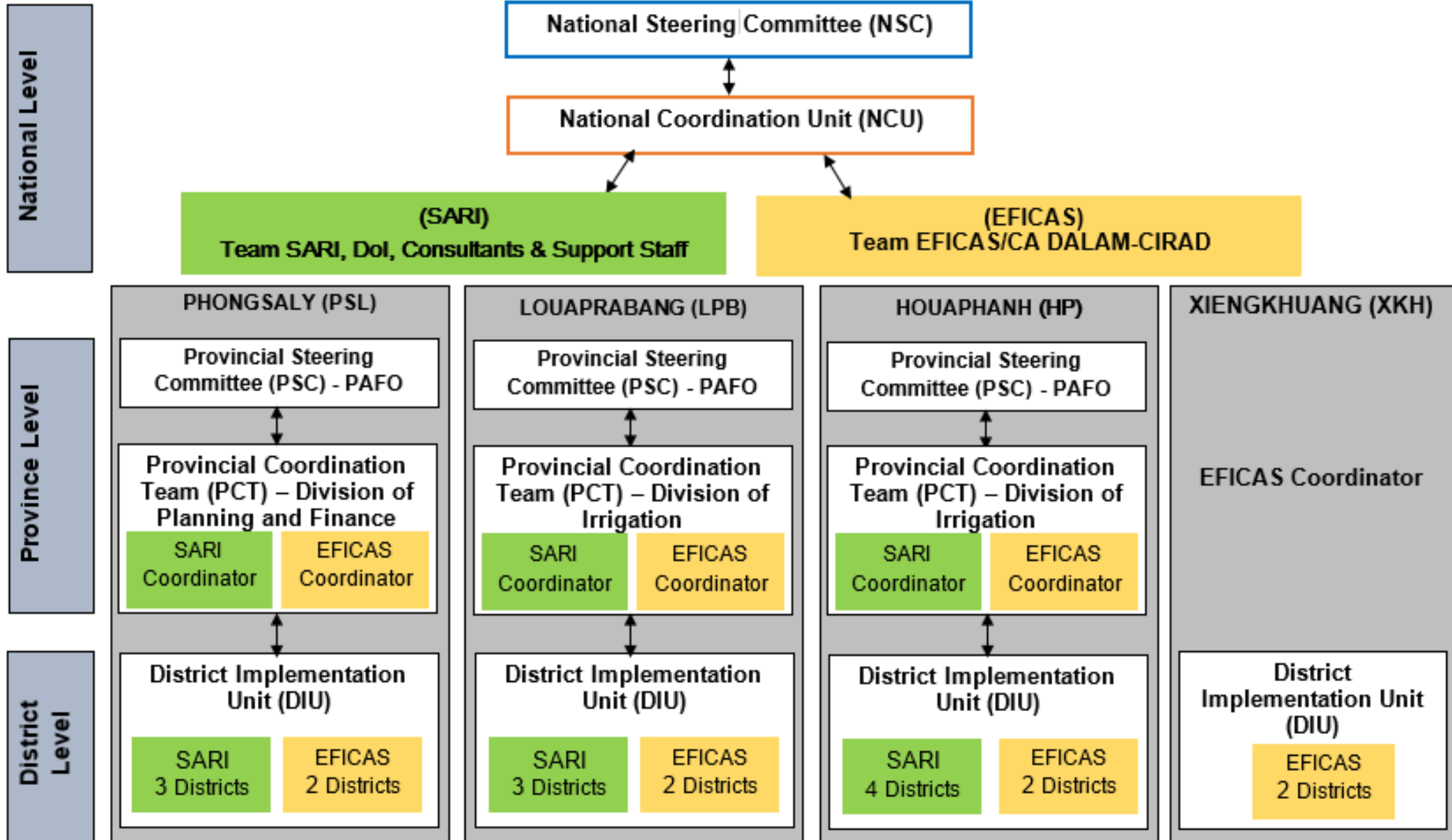
INTERVENTION AREAS

- **SARI:** 115 villages – 3 provinces (LPB, HP, PSY)
- **EFICAS:** 24 villages (12 intervention villages + 12 control villages) – 3 provinces + 9 villages in XKG province (4 districts: Kham, Phoukoud, Pek & Phaxay)

➔ **6 joint (SARI-EFICAS) in 3 provinces (4 in LPB, 1 in HP and 1 in PSY)**



NUDP 2.2 Organization

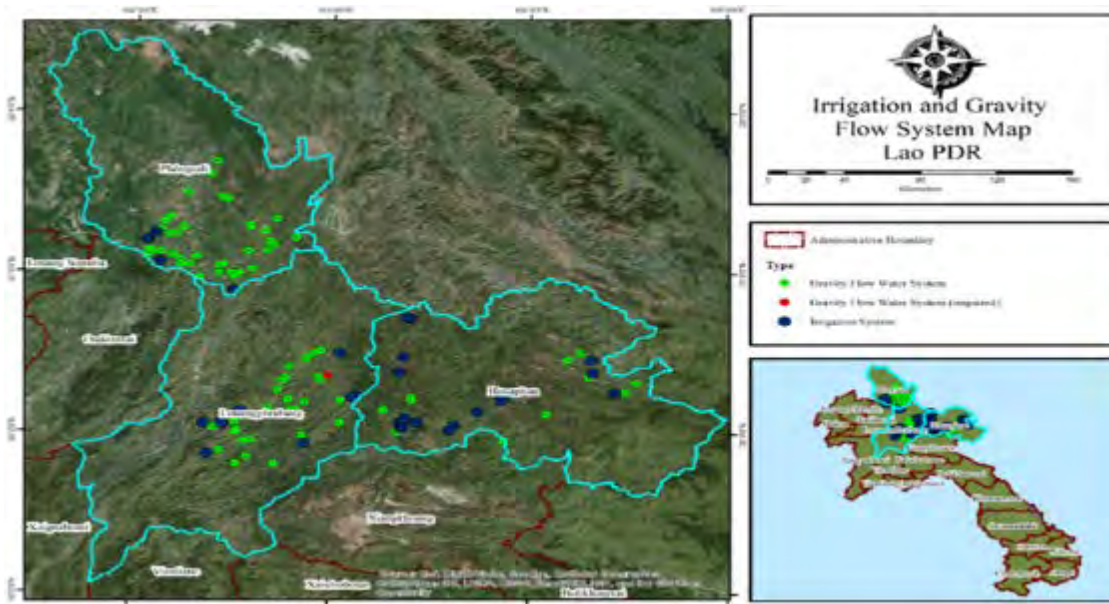


SARI Component

2018-2019 HIGHLIGHTS



Operation & Maintenance for Irrigation and Watershed Management Schemes



Province	GFWS	Irrigation	Total
Phongsaly	39	4	43
Luang Prabang	31	9	41
Houaphanh	17	18	35
TOTAL	87	31	118



Capacity Building for DAFOs and PAFOs teams, Target Villagers

■ Training on O&M for maintenance and irrigation schemes = 156 men.day

- Improve/Update WUCs and organize WUGs;
- Develop mandate and regulations for WUCs;
- Set-up O&M money savings;
- Strengthen capacity of WUCs on accounting and finance management;
- Perform irrigation and water supply maintenance;
- Improve capacity on water allocation; and
- Capacity building on crops planting calendar in the villages.



■ Training on Watershed Management = 198 men.day

⇒ Organized in 2 rounds:

1st round: conducted in each target province

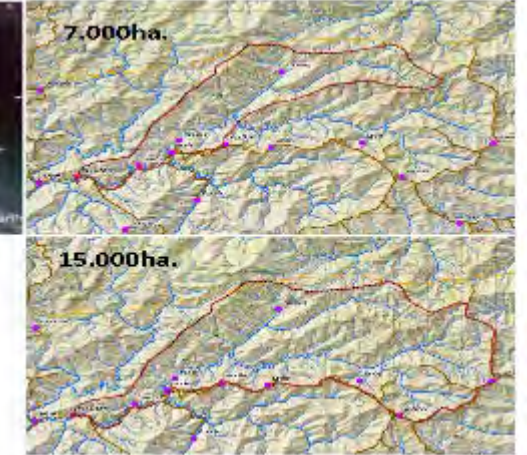
2nd round: common session in Luang Prabang to ensure the proficiency of its staff in the implementing management in their target watershed areas.



Watershed Plan Implementation for Management and Development



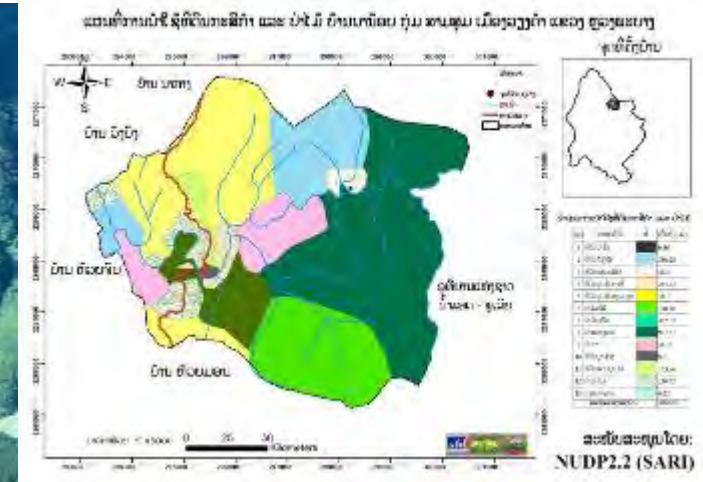
ເນື້ອທີ່/ຂະໜາດຕ່າງໂຕໆ ທີ່ເໝາະສົມ ໃນ
ການເຮັດແຜນຜັນຄ່າຍຸດສະໝັດບ້ານ-ກຸ່ມບ້ານ
ຄວນຈະໃຫຍ່-ນ້ອຍຊໍາໃດ?
500m²....500ha...15.000ha.???



Item	Provinces	Nb of Pilot Watershed Areas	Nb Concerned Villages
1	Phongsaly	4 areas	21 villages
2	Luang Prabang	6 areas	21 villages
3	Houaphanh	4 areas	19 villages
Total		14 areas	61 villages

Watershed Management

- 13 villages have been completed Land Use Planning Installation
- 125 households in 12 initial villages adopted “agroecology” activities for their farm production such as agroforestry, establishment of improved pastures



Demonstrating agroecological techniques for Watershed Management and Development

- ❑ 7 households / two villages in HP and LPB engaged in Cardamom Plantation
- ❑ 7 households involved in activities related to livestock systems improvement and 12 household practice SRI techniques in Luang Phrabang province



Conclusion

SARI component achieved most of its targets and objectives with a smooth implementation of project activities:

- The local actors including government staffs have been capacitated in the integrated watershed management as an integral part of capacity development.
- The communities have been implementing the systematic O&M practices and undertaken soil conservation and watershed protection to maximize their water supply and irrigation infrastructure.
- More than 48,000 local people and 750 ha of agricultural areas accessed to waters by the constructed schemes.

Financial Management

A	B	C	D	E	F	
No	Activity Name	Budget including LGO contribution	Budget of NUDP2.2	Total Expenditure 2.1&2.2 up to Dec/2019 (Euro)	Balance (Euro)	Remark
1	Infrastructure Component	3,855,000	3,500,000			
B1	Activity (Material)	2,670,400	2,415,075	2,526,747.81	-111,673	
B2	Human Resource	693,270	593,595	529,644.47	63,951	
B3	Capacity Development	223,660	223,600	209,367.88	14,232	
B4	Other & Contingencies	267,730	267,730	181,833.56	85,896	
Total		3,855,000	3,500,000	3,447,593.72	52,406	

EFICAS Component

2018-2019 HIGHLIGHTS



EFICAS ACTIVITIES

- Continuation of the support for the scaling up of eco-friendly innovations in the EFICAS villages
- Support to the scaling out of lessons learnt and innovations in 4 SARI villages
- Development of the capacities and empowerment of local stakeholders
- Impact assessment: third phase of data collection

Continuation of the support for the scaling up of eco-friendly innovations in the EFICAS villages



Strengthen villagers' participation to the innovation process

- The local staffs involved in EFICAS activities have taken the **ownership of the methodology of CADP** (planning and implementation process)
- The participation rate of the village communities to the definition of the annual CADP with the district authorities was high (average of 75% of total households) and in most of the villages **more than 70 % of the total households are committed in the CADP activities.**
- The achievement of CADP objectives is characterized by a **completion of CADP which varies between 75% and up to 125%** according to villages during these two last years.



CADP meeting in Ban Navene (joint village, Viengkham district)

Continuation of the support for the scaling up of eco-friendly innovations in the EFICAS villages



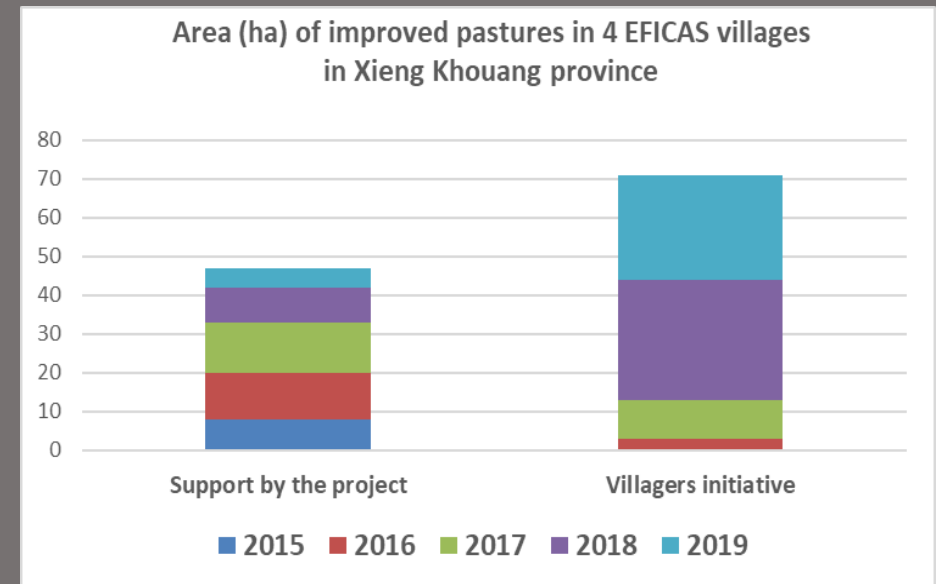
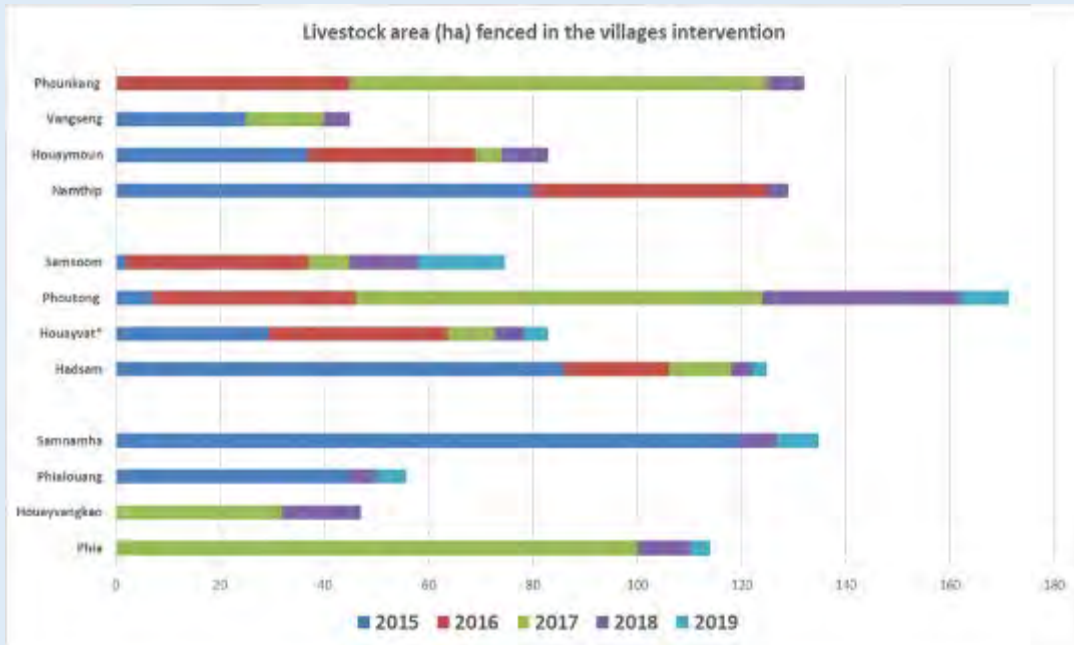
Improvement of livestock systems

4 complementary pillars

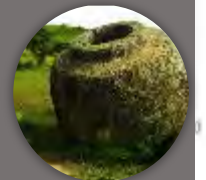


1 Improving animal roaming control

- ➔ Permanent fencing of ~ 1200 ha
- ➔ 10% < of crop damages due to animal roaming



- ➔ Partnership PAFO & EFICAS
- ➔ Revolving fund model with an initial revolving fund of 80 000 000 LAK
- ➔ Total of 120 ha, 60 HHs concerned



Continuation of the support for the scaling up of eco-friendly innovations in the EFICAS villages



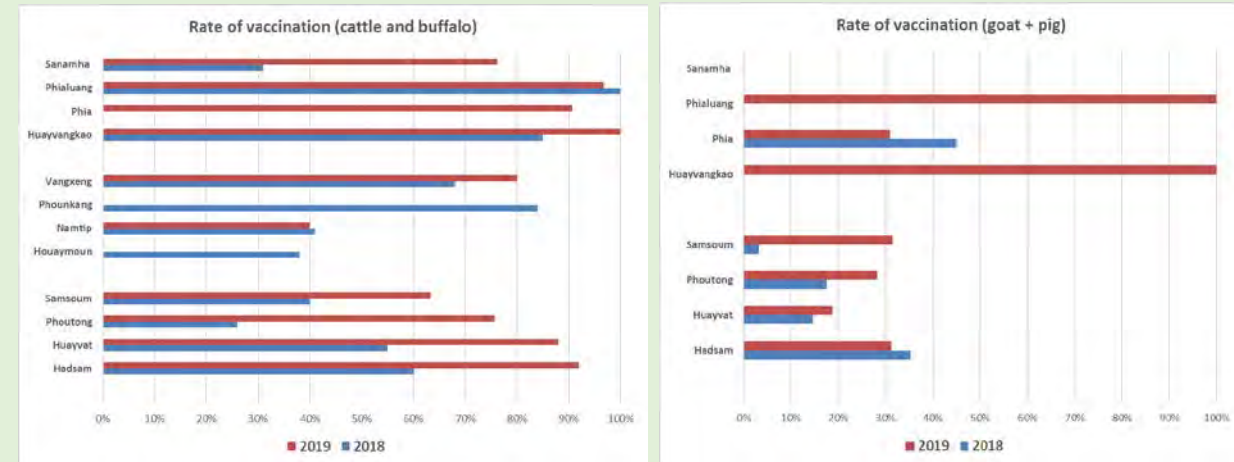
Improvement of livestock systems



3 Improving animal housing

- ➔ 3 collective stalls (for cattle), 153 individual stalls (for goat and cattle) and 7 troughs
- ➔ Increasing collect and use of the animal manure for vegetable crops
- ➔ Trainings (once a year) related to the manure management (e.g. compost production)
- ➔ Development of cattle fattening system with “model farmers”

4 Animal health



- ➔ 100% of the veterinary workers attended to the trainings;
- ➔ Vaccination rate of big livestock has significantly increased while regarding vaccination rate for goats and pigs still remains very low
- ➔ For small livestock, farmers are still reluctant to vaccinate their animals as they consider that costs are too expensive.



Continuation of the support for the scaling up of eco-friendly innovations in the EFICAS villages



Development and promotion of multi-cropping systems integrating legumes

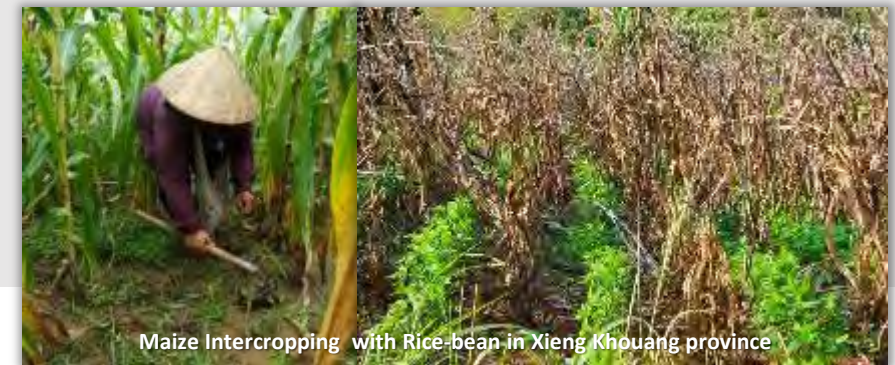
○ Upland rice/maize-based cropping systems with pigeon pea (*Cajanus cajan*)

- ➔ The adoption of such cropping system is very limited in Houaphan & Phongsaly as there is currently no more existing value chain for stick lack at local level.
- ➔ And the use of pigeon pea during the fallow period to improve soil fertility is also limited as farmers are not convinced by its agronomical benefits (in HP and PSY)



○ Maize-based cropping system with rice bean (*Vigna umbellata*)

- ➔ Current opportunity for the dissemination of such systems (mainly in XKG) because of (i) the soil depletion due to maize monoculture and (ii) new market opportunities (with Chinese traders) = in 2018/2019, ~250 HHs concerned and 130 ha in XKG



○ Testing innovative cropping systems in Ban Poa Center & on-farm

- ➔ e.g. Designing organic soybean-based cropping systems in XKG province



Continuation of the support for the scaling up of eco-friendly innovations in the EFICAS villages



Sustainable management of agricultural land

○ Preservation of forest areas with the promotion of NTFPs

Provinces	2018		2019	
	Households	Cardamom seedlings	Households	Cardamom seedlings
Houaphanh	44	16100	3	2000
Luang Prabang	59	28200	21	8500
Phongsaly	33	9900	-	-
	136	54200	24	10500

- Diversified agroforestry systems with Cardamom, Galanga, Cafe represent an effective way to protect the riparian forest and to preserve the watershed
- Attractive NTFPs as the demand is still high
- Selling price (var. Guangdong) has decreased but still interesting: 200-300 000 LAK/KG (dry)



➡ **Total of 214 HHs involved in this activity since 2015**

○ Facilitation of contractual agreements between private companies and village communities for rice bean and soybean production

- Organization of exchanges between farmers from Kham basin to other villages in XKG where there is already contract farming for legumes crops ;
- Concertation with private companies (2) who were interested in the purchase of legumes (XKG)

➡ **Rice bean: 7 tons of seeds were distributed to farmers in XKG (2018/2019)**

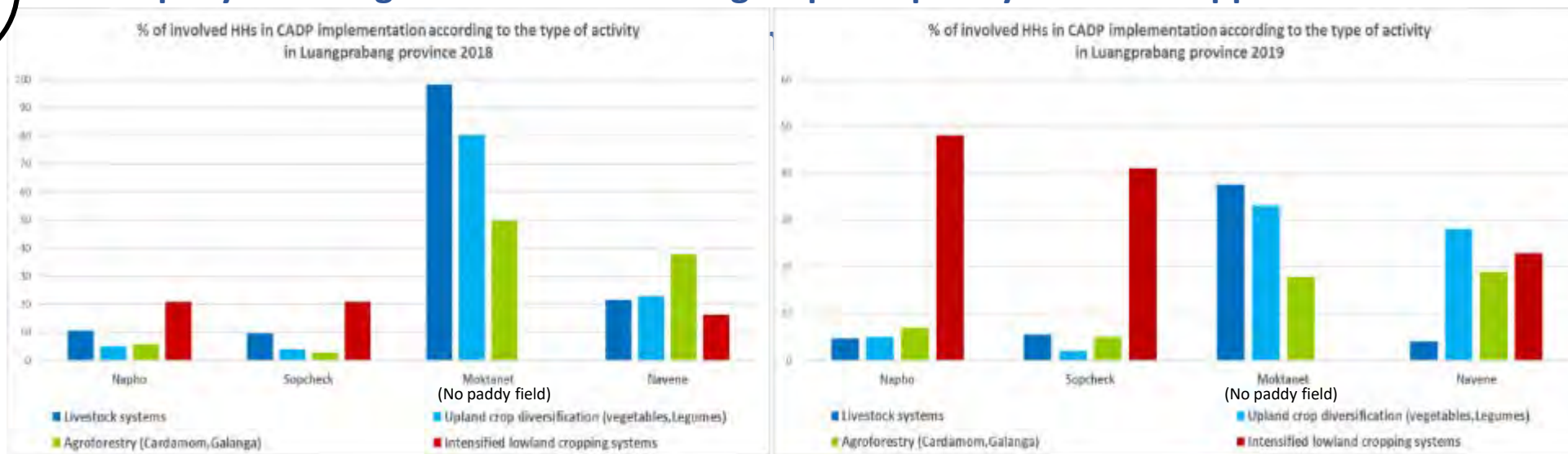
➡ **Groundnut: 20 tons of seeds were distributed to farmers in XKG (2018/2019)**



Support to the scaling out of lessons learnt and innovations in 4 SARI villages



Accompany the village communities through a participatory territorial approach and the CADP



Support the beneficiaries of irrigation schemes for the intensification in the lowland areas

2018 (2019 ongoing)

Provinces	Luang Prabang			Houaphan	Phongsaly
	Napho	Sopchek	Navene	Phontong	HouayVangkao
HHs	18	20	19	14	15
Area (ha)	1,2	1,5	0,5	1,2	1,3

But activities implemented in the paddy field areas are still limited by:

- Risks of pest damages
- Roaming livestock
- Soil quality and fertility management
- Social tensions
- Access to market and organization of vegetable value chains

Support to the scaling out of lessons learnt and innovations in 4 SARI villages



Enable, first, a favorable environment for the development of a vegetables production and marketing

Trainings sessions were organized in order to :

- Provide information about vegetables production and commerce context in Luang Prabang;
- Suggest an organization model owned and managed by farmers in order to generate and sustain incomes from this activity;
- Provide basic understanding and tools to enable vegetable production planning and;
- Strengthen know-how in eco-friendly and integrated vegetables systems;
- Develop on-farm organic production: kitchen garden activities (plantation calendar of selected vegetables, the importance of seasons), integrated farming, integrated Pest Management (IPM) and vermicomposting.



Development of the capacities and empowerment of stakeholders



DALaM team

- 3 Masters ongoing (@ Nabong Faculty) with the topics as follow:
 - *Assessment of Participatory Land Use Planning for land cover change* (by S. Phimmasone)
 - *Evaluation of the effect of improved pastures on the Soil Organic Carbon (SOC) dynamic in Northern Laos* (by S. Chaivanhna)
 - *Assessment of maize-rice bean intercropping systems in Kham basin, Xieng Khouang province* (by C. Phonekhampheng)

- Training and capacity development on:
 - KOBO toolbox for Data collection (M&E) = 20 men.days
 - Data management, data analysis and interpretation = 12 men.days
 - GIS and remote sensing = 24 men.days
 - Strengthen the capacities for the elaboration of capitalization (booklets, annual reports) and extension materials (posters, videos) = 49 men.days

➔ **Total of 105 men.days**

Development of the capacities and empowerment of stakeholders



PAFO/DAFO staff

TOPICS	Unit	2018	2019
• Goat raising systems	men.days		18
• Communications and facilitation	men.days		60
• Vegetables producers groups organization	men.days		12
• IPM & Vegetables cropping systems	men.days		38
• Environmental assessment	men.days	45	
• Video capture techniques	men.days	5	10
	TOTAL	50	138

 **188 men.days**



Producers – VLMC (Village Land Management Committees)

Year	Provinces	Compost production	Forages plantation & management	Vegetables cropping systems	Producers groups organization	Goat raising systems	Animal health care	VLMC (Field Survey)	TOTAL /Year
2018	Luang Prabang	96	150	160			12	87	998
	Houaphanh	93	162	30			79	72	
	Phongsaly			15				42	
2019	Luang Prabang				25	255		87	549
	Houaphanh					24		72	
	Phongsaly		29	15				42	
Total/Topic		189	341	220	25	279	91	402	1547



Impact assessment: third phase of data collection

Socio-economic data were collected in control and intervention villages in 2014 (baseline) and 2016 (short-term impact assessment, test of data collection using tablets). A third phase of data collection at the end of the year 2018 was carried-out in order to assess project impact on target village communities. A total of 1342 Households were surveyed in 24 villages (12 EFICAS villages + 12 control villages) during this third round.

The project database is now accessible and the data visualization tool developed by EFICAS project can be used via: <http://data.eficas-laos.net>.



 **THEY ARE EFICAS!**



Documenting and capitalizing on the activities implemented

- **7 Booklets (4 EFICAS & 3 SARI) in Lao language** dedicated to government staffs (PAFO/DAFO)
- **15 video-clips (8 EFICAS & 7 SARI) in Lao language with English subtitles** linked with the previous topics and dedicated to farmers and government staffs
- **11 Posters (EFICAS)** dedicated to village communities and extension agents
- **4 booklets (EFICAS) in English** (2 still ongoing)



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Captured with smartphones by technicians



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Key messages

▪ **Operation & Maintenance for Irrigation and Watershed Management Schemes**

- ➔ Operation and Maintenance for both Irrigation and water supply schemes including Watershed Management require a long-term period of implementation in term of to make sure to understand on ownership of beneficiaries
- ➔ The Effectiveness of Operation and Maintenance Practice at least tow weeks/time, however, if in the raining season may be required frequently time more.
- ➔ Ownership and Strong leadership of communities are important factors of effectiveness on Operation Practice



Key messages

- The existing PLUPs still remain a visionary map: experiences have shown that initiatives such as CADP, concertation & negotiation, capacity building are required to accompany village communities in the innovation process and *in fine* to reach this goal (PLUP).
- ➔ One of the major challenge is now to develop the capacities of the local staffs (PAFO/DAFO) and to develop the (long-term) CADP approach at larger scale. New funding mechanisms are needed: FYI within the EFICAS project, the CADP implementation required an average annual amount of 2000 USD per village (~50 households involved).
- Regarding the (new) joint villages, the first two years are always considered as a period of test (and trust) during which many households are still reluctant to engage into collectively negotiated activities.
- ➔ Agroecological transition requires first of all the commitment of the whole village community, the local ownership and a continuous learning process.
- The extension phase confirmed that critical mass is reached for activities related to livestock systems but the adoption of cropping systems based on agroecology, in the upland and lowland areas, is still limited. The main issue remains above all the lack of market “pull” for legumes.
- ➔ The promotion of biodiversity at large-scale and the scaling-up of diversified cropping systems based on agroecological practices strongly rely on the coordination partnerships between village communities, GoL, projects and the private sector.

Key messages

- Diversified agroforestry systems with Cardamom, Galanga, Cafe represent an effective way to protect the riparian forest and to preserve the watershed.
 - ➔ It is relevant to develop such diversified systems, at the (micro)watershed scale, in order to support the agroecological transition that ensure a better management of natural resources and improve resilience of farming systems to climate change.
- An initiative should be made to develop a multi-stakeholders platform, at provincial level, that would improve the coordination mechanisms and in fine, improve the overall efficiency of various projects. One of the role of this platform would be to share information and experiences and to develop coordination mechanisms.
- Finally, monitoring and evaluation is an essential element of the innovation process. The challenge is to build the capacities of the local staffs to conduct this permanent activity and again, to find out the funding mechanisms to support this innovation process.