



Ministry of Agriculture and Forestry Department of Agricultural Land Management

Disseminating underutilized species and cover/relay crops as a foundation of resilient farming systems (PROMOCROP) and Promote the adoption of suitable CA and AE and other environment friendly practices

**Annual General Meeting (AGM)
Agroecology Learning Alliance in South East Asia (ALiSEA)
24th and 25th July 2017, Vientiane Capital**

I. The Project background

In 2016, the project called out for project proposals from various interested parties in Southeast Asia region. The project proposal on PROMOCROP from the Conservation Agricultural Land Development Center was one of several winning proposals which have been awarded from ACTAE regional project.

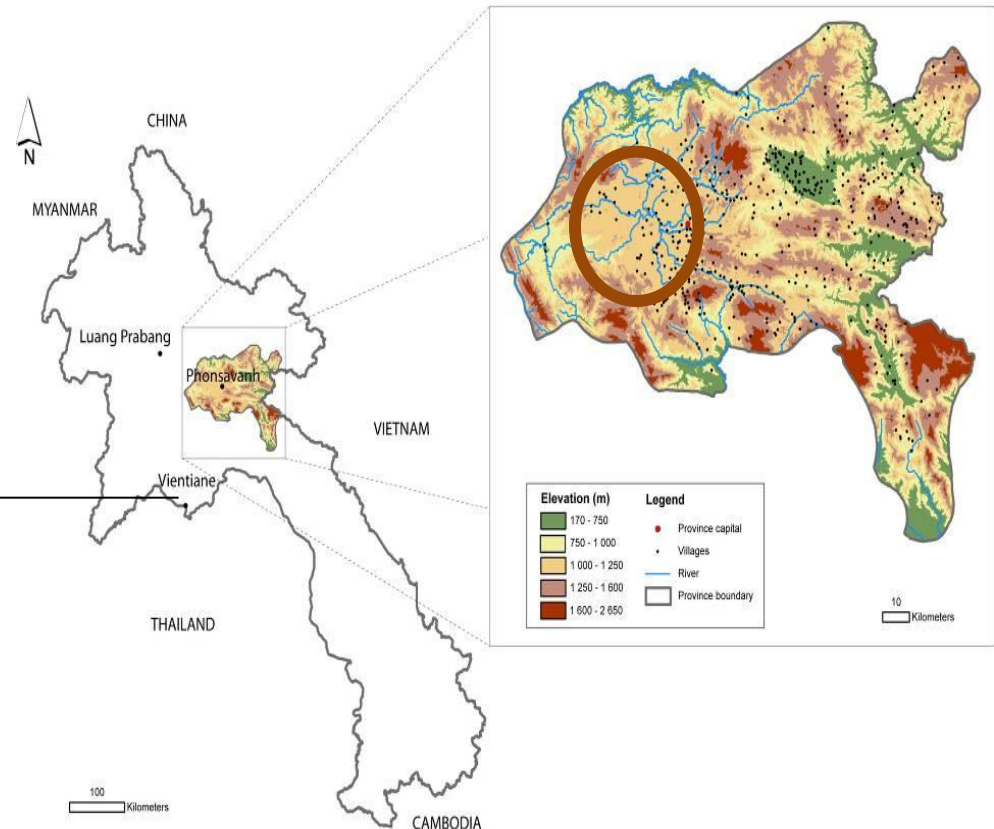
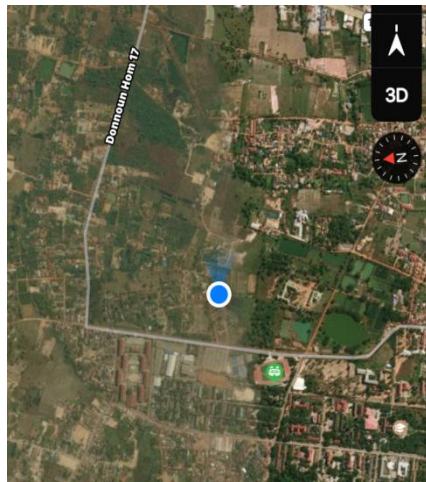
Department of Agricultural Land Management and Centre for International Cooperation into Agricultural Research for Development (CIRAD) was officially signed on 11 July 2016 for PROMOCROP

Department of Agricultural Land Management and Centre for International Cooperation into Agricultural Research for Development (CIRAD) was officially signed on 01 March 2017 for the adoption of suitable CA and AE and other environment friendly practices

II. Location of the Project under CIRAD supporting

I. **Vientiane capital** in ALaDC supported by CA and AE project

II. **Xiengkhoung province** in Ban Poa TSC supported by PROMOCROP an CA and AE project



Mandate of ALaDC

Mandate

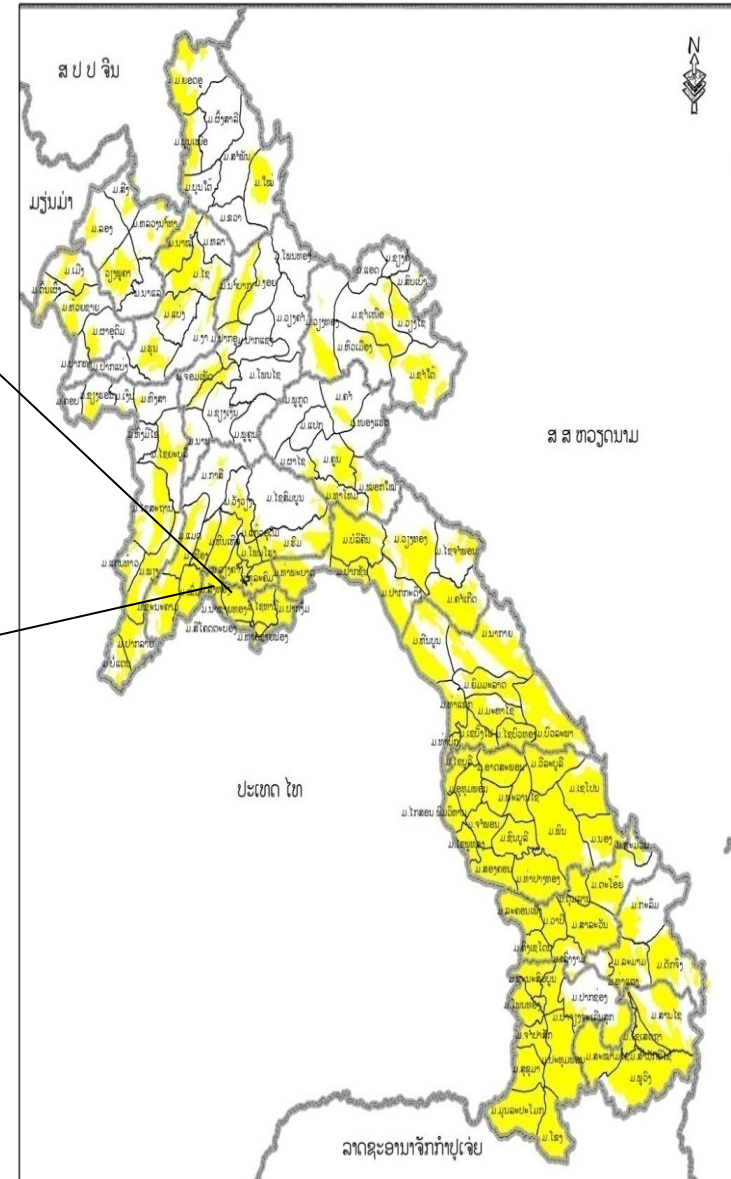
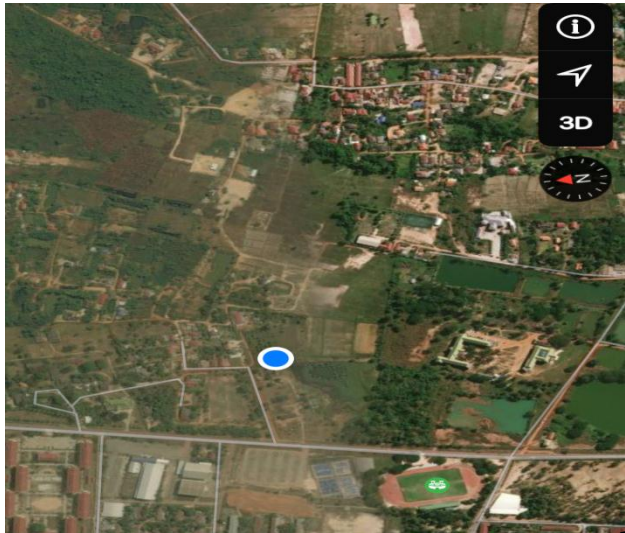
Agricultural land conservation and development center (ALaDC) is a new resident of the state agency was established and has a central role in the actual use of land with high efficiency, restoration and improvement of soil fertility, development and protection of land to serve production and sustainable agriculture. Studies and use technology (agriculture, surveys, research and fertilizers) and modern methods of the conservation for development of efficient agricultural land to improve sustainable agriculture.

Organizing training for state officials in such sector and local unit, to strengthen the technical skill and knowledge.

Testing, demonstration and transfer of modern technologies that appropriate to each area of land use, land reclamation and the use of different kinds of fertilizer to increase crop production.



Location for demonstration plot at ALaDC



Main activities at ALaDC under CA & AE project



Picture1. maize+ricebean (2017)



Picture2. Maize+Pigeon pea (2017)

Demonstration plot for CA, there only one main crop planting (maize) with 3 different cover crops (Pigeon pea, ricebean, centrozema) with a total area is 1638 m²

For legume Collection, there are 51 species have been planted. For some bean varieties with limited amount, they have been planted in the plastic bag to ensure their germination and maintenance with a total area is around 700m²



Picture3. Legume collection (2017)



Picture4. Juncea (2017)

History and Mandate of Poa TSC



1. Main steps of the TSC history since its creation

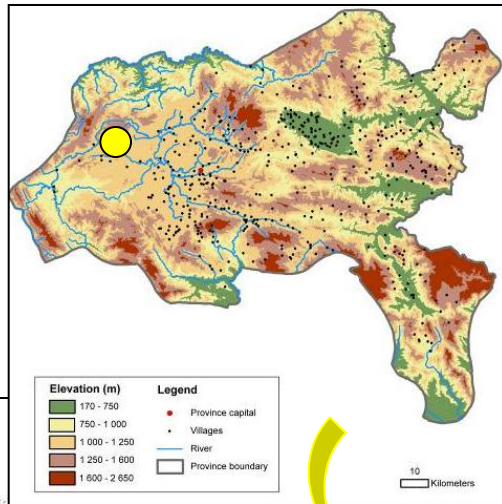
Ban Pao center was created in 2007 from a collaboration between 4 partners: the National Program in Agro ecology (PRONAE, NAFRI/CIRAD partnership), the Sector-based Program in Agroecology (PROSA, MAF/CIRAD partnership), the Provincial Agricultural and Forestry Office (PAFO) of Xieng Khouang province, and a farmer group from Ban Pao village.

2. TSC mandate

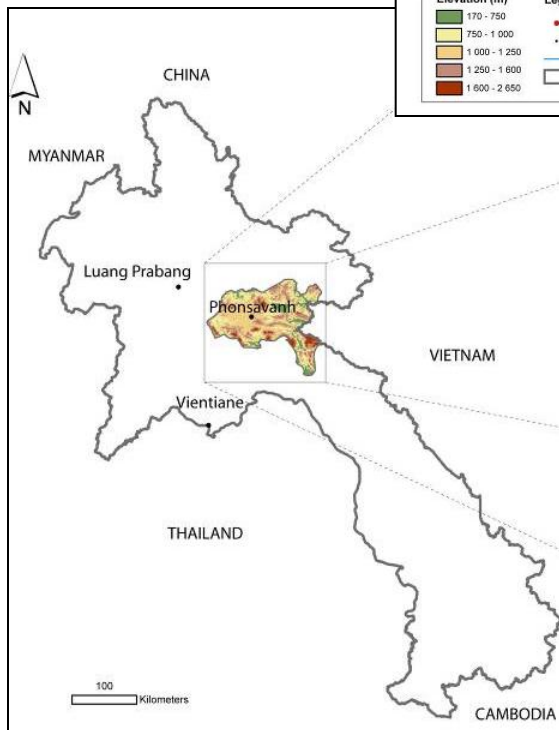
TSC mandate is to provide the following services:

- ❖ Demonstration on CA-based innovative agricultural and livestock systems,
- ❖ Sensitization and training activities,
- ❖ Maintenance and production of plant material,
- ❖ Service provision to farmers.
- ❖ Knowledge production and dissemination

Location for Poa TSC



ທີ່ຕັ້ງ: ຫ່າງຈາກໂພນສະຫວັນໄປຫ່າງ
ທິດຕາເວັນຕົກປະມານ 45 km



Main activities under PROMOCROP project

1. Disseminating underutilized species and cover/relay crops as a foundation of resilient farming systems (PROMOCROP)"

Objective

The goal is to improve the capacities of key operators in Laos and Cambodia to produce and disseminate a diversity of cover/relay crops and underutilized species that are of primary interest to foster and disseminate agro-ecological innovations.

The focus will be on the preservation and seed production of acid-tolerant forage species (e.g. *Brachiaria* sp. and *S. guianensis*), high-elevation adapted staple (e.g. rice), pulse (e.g. beans sp.), and cover crops (e.g. buckwheat)



Picture 5. Pigeon pea (2017)



Picture 6. DT84 (2017)



Picture 7. Visit Poa TSC by Mr. Somsamone DDG of PAFO(2017)



Main activities under CA and AE project



2. Promote the adoption of suitable CA and AE and other environment friendly practices

Objective

The specific objectives include

- ❖ Maintaining and further developing demonstration on CA and AE based innovative agricultural and livestock systems
 - ✓ Demonstration plots for CA
 - ✓ Extension of DP for CA at ALaDC
 - ✓ Demonstration plot on one month banana systems
- ❖ Training of farmers and technicians, inside and outside Poa TSC for transferring innovative systems and contributing to the agricultural development in mountainous area and in the Plain of jars

Conservation agriculture (CA) vs conventional (plough-based) agriculture (CV) performance and impact assessment

In 2017, the experimental design was simplified and reduced in surface (from 9 to 6 ha).

There are 3 main crops: Rice + stylo, maize + crotale and soybean continues with mung bean



Picture 8. Rice CLS before harvest (2016)



Picture 9. Soybean DT12 (2017)



Picture 10. Maize LVN10 before harvest (2016)

Improvement of cattle production systems

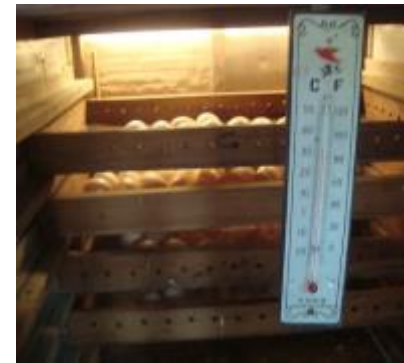
Traditional farming systems in the area are based on lowland rice and upland extensive big livestock (cattle and buffaloes) systems. Since 2012, the activity of short-term fattening of young bulls has been expanded (both direct grazing and cut-and-carry system) with the increase in improved pasture (ruzi, mullato II, brizantha MG5, signal, guinea grasses).



Picture 11 to 14. Direct grazing and cut & carry system for beef fattening (2014)

Improvement of chicken production systems

Poultry is an important element of rural household self-sufficiency. Traditional raising is based on animal free roaming in family courtyards. The profitability of more intensive poultry production systems based on chicken raising in chick house, use of home-made incubator to speed-up chicken birth, and diversified food intake (integrating the use of CA systems by products, e.g., finger millet, pigeon pea, and stylo) is tested since 2012.



Picture 15 to 17. Improved chick house, incubator for chicken eggs and brooder house (2014)

One month banana planting system

One month banana planting, is in fact an intergraded/intercropping system. The main purpose of this is to successfully plant fruit trees under rainfed condition. To make farmers get early benefit after one month of planting tree in the same area they need to plant vegetables, fruit tree and banana tree at the same time



Picture18. One month banana systems

Fish raising

Water scarcity is one of the major issues for agriculture in Laos, particularly in the highland areas and upper terrace field. During the dry season, farmers often face with water shortage for crop cultivation and animal husbandry, particularly in the drought zones. However, farmers are still facing with insufficient water use due to the lack of proper techniques to store water and increase soil moisture retention that will be available for cropping during the drought period.

Every six months, about 6000-8000 fishes will be released into a pond, applied with 20 to 30 kg of cattle waste and grass will be chopped to feed fish.



Picture 19. Fish pond (2016)

A scenic landscape photograph showing rolling green hills. The hills are covered in lush green vegetation, with some areas appearing to be terraced fields. In the background, a larger mountain peak is partially obscured by white clouds. The sky is overcast with soft, grey clouds. The text "Thank you" is written in a large, white, sans-serif font, centered horizontally and vertically over the middle of the image.

Thank you