



TOWARDS A REGIONAL INITIATIVE TO DEVELOP E-LEARNING RESOURCES IN AGROECOLOGY

# Mapping and Assessing University based Farmer Extension Services in Laos through an Agroecological/Organic Lens

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## Introduction

- Agriculture is central to human survival - it provides food and fuel and other ecosystem services, is an important source of livelihood, and plays a crucial role in economic development.
- However, it is also a major source of environmental degradation, contributing to climate change, depleting freshwater resources, degrading soil fertility and polluting the environment through fertilizer and pesticide use.



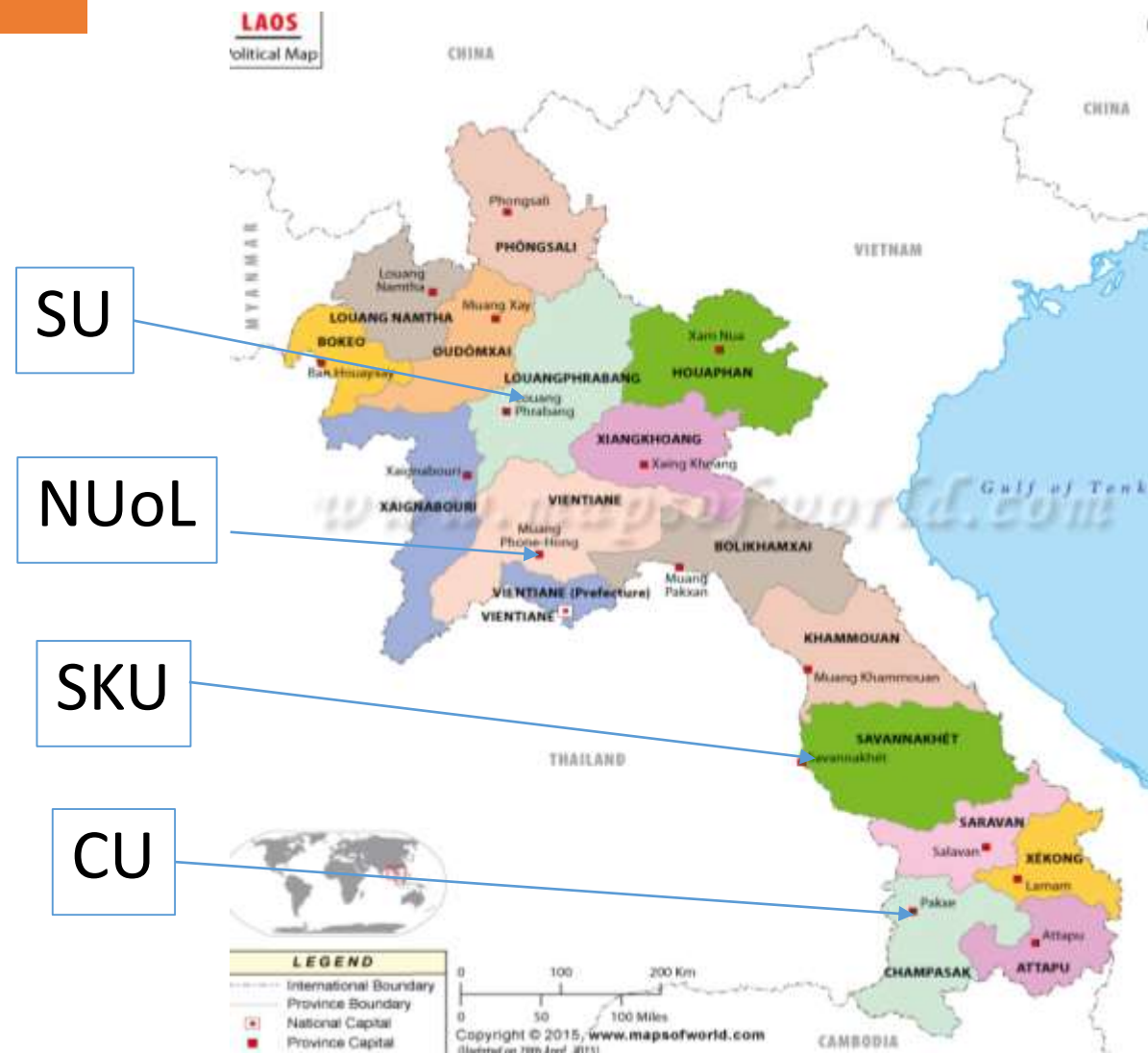
- In the member states of the Association of Southeast Asian Nations (ASEAN) there are at least 6,500 higher education institutions working for supporting agro ecology in the region.



# Introduction

There are four universities in Laos:

- Souphanouvong university (SU)
- National university of Laos (NUoL)
- Savannakhet university (SKU)
- Champasak university (CU)
- Lack of information on the role of university in support/inhibit the sustainable agriculture.
- Do universities have adequate knowledge, scientific expertise and service systems or technical support to train students for AE/OA ?



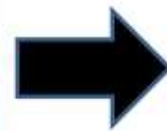


## Objective

This study aims to understand the role of universities for farmer extension services and their contribution to ecologically sustainable agriculture and rural development.



# Methodology



**Outputs**



- 1) Policy frame work relate to AE
- 2) GENERAL State of the extension system,
- 3) UNIVERSITY specific,
- 4) AGRO-ECOLOGICAL/ORGANIC specific





## Results

### 1. Policy frame work related to agro ecology extension

- The policies, strategies, laws and regulations regarding agro-ecology are clear formulated by MAF under the principles of *“Sustainable resource utilization and land-use planning”* (*public online*)
- The *“Clean, Safe and Sustainable agriculture”* is integrated in the strategy for agriculture sector through 2025 and vision until 2030 of the MAF (*public online*)



## 2. General state of the agriculture extension system in Laos

- The overall extension system in Laos is implemented by the MAF
- Department of Agriculture Extension and Cooperatives (DAEC) under the MAF is the main actor for implementing.
- The extension system is distinguished in chronological time line:  
**1975-1985:** Agriculture Cooperative (*Sahakhorn*)  
**1986-2001:** New Economic Mechanisms. It was impacted to farmers in 10 years later by 1996. But no extension approach in implementing.





## **2002-Present:** The Laos Extension Approach (LEA).

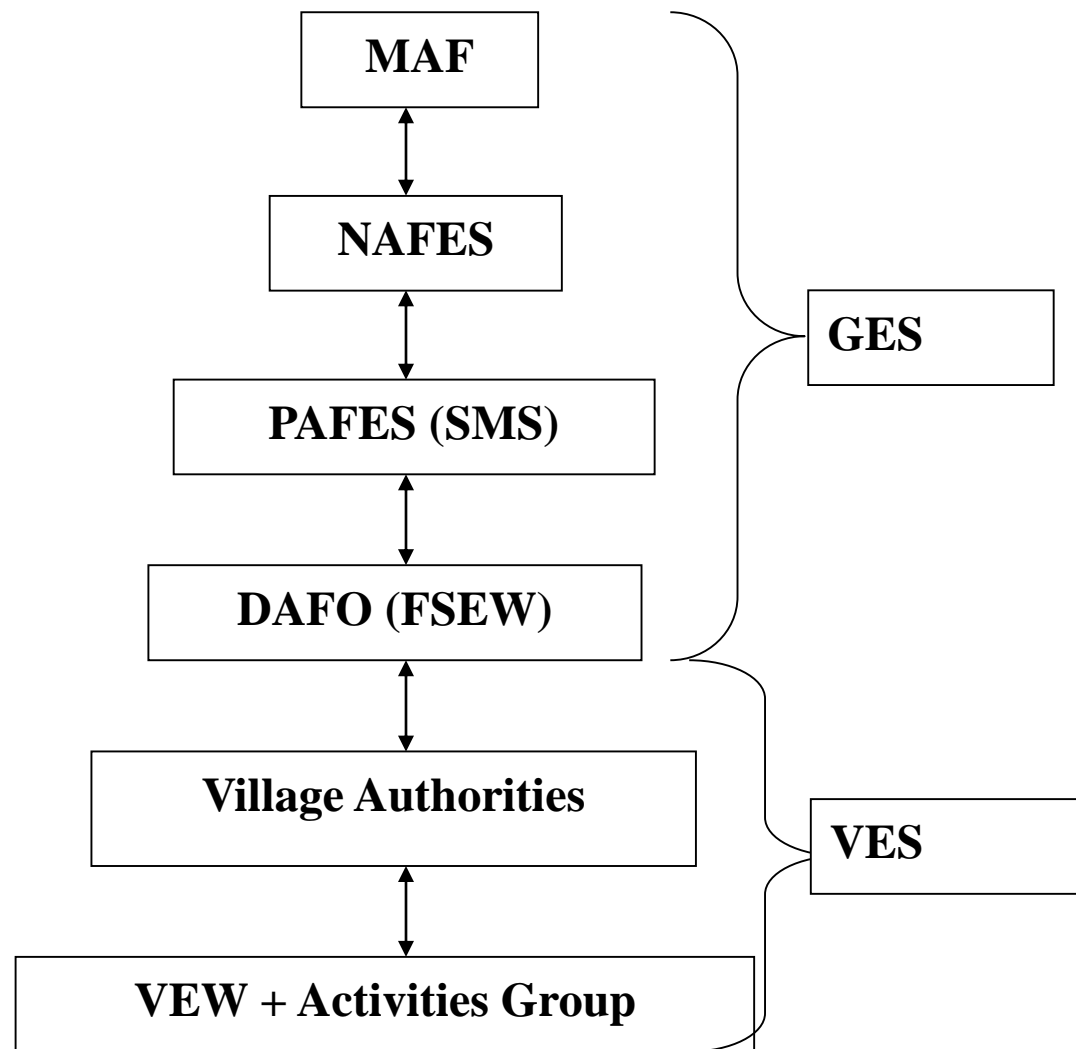
The LEA consists of 2 fundamental systems:

- Government Extension Service (GES) = DAEC + PAFO + DAFO
- Village Extension Service (VES) = Village authorities
- Village Extension Workers (VEW)

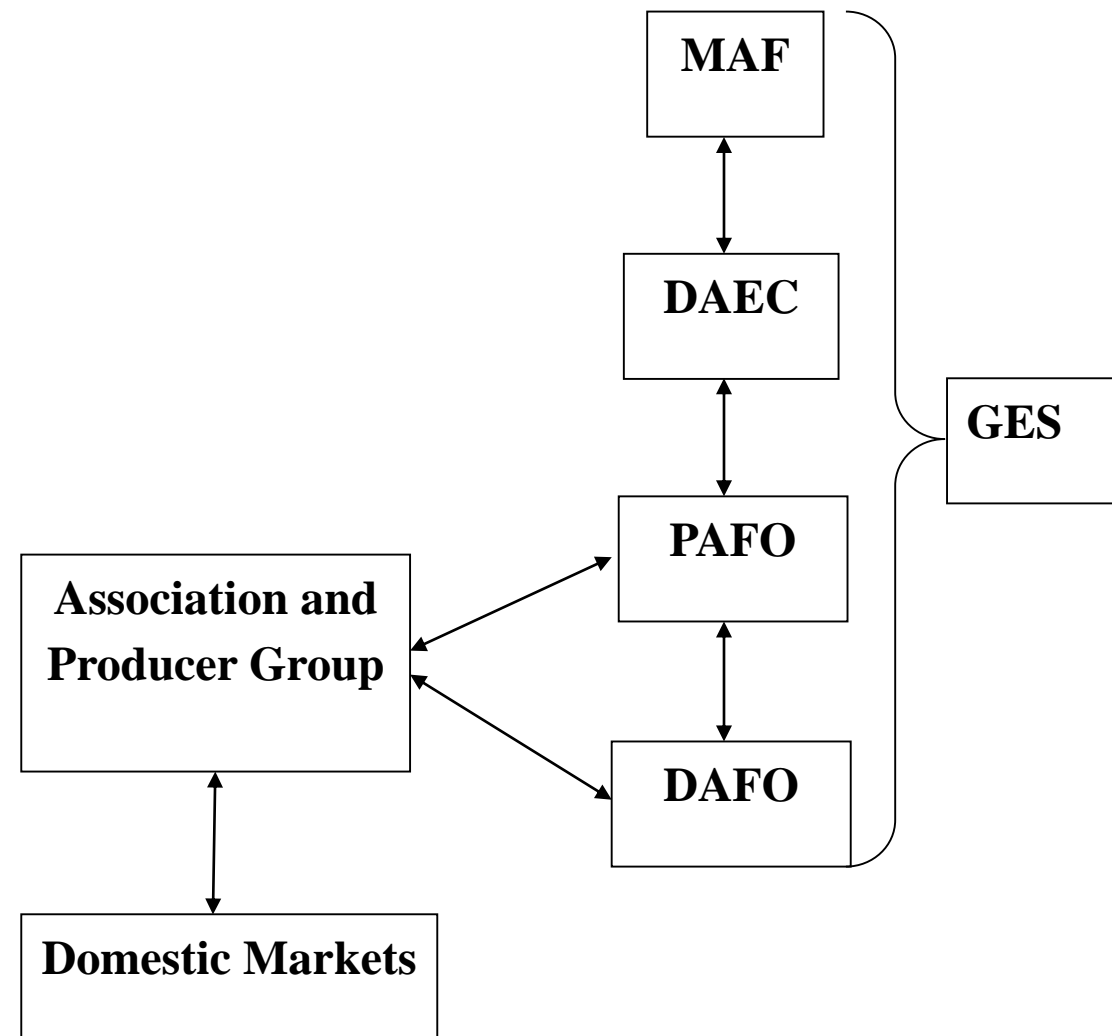
## **2013-2014:** MAF adapted the Agriculture Cooperative (AC).

### **Present day:**

Mainly is LEA and AC will be formed for activities relate to market.



The formal structure of Lao Extension Approach (LEA)

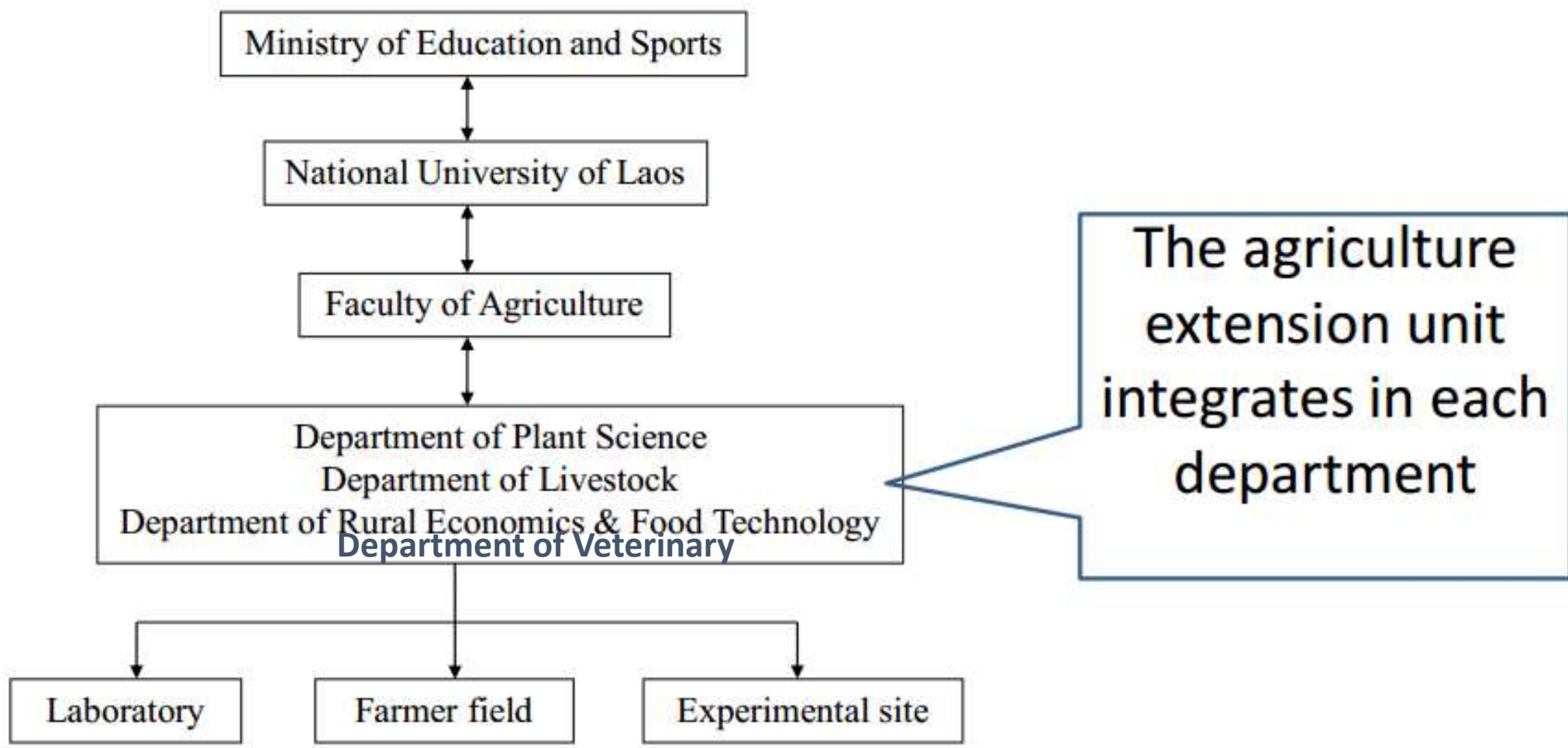


The formal structure of Agri.Cooperation (AC)



### 3. The Universities in Laos

- There is cooperation between MAF and university to support agro ecology/organic agriculture.
- The university plays a role on:
  - 1) Human resource development
  - 2) Curriculum development
  - 3) Research and Extension: publication, booklets, text book, brochure, poster (We may find projects to support for writing)
  - 4) Academic service.



The general extension system in agroecology at the university



## Teaching programs to support Agroecology and e-learning

- **Eight BSc curriculums:**

- Crop production (2 curriculums)
- Plant protection
- Livestock (2 curriculums)
- Fishery
- Agricultural economics and Food technology
- Veterinary

- **Three Master programs:**

- Sustainable Agriculture Resources Management
- Crop Science
- Animal Science



# Example of elearning course at NUOL

→ ↻ ⓘ lms1.nuol.edu.la/course/index.php?categoryid=63 ☆ 🔔 ⋮

NUOL LMS English (en) ▾ You are not logged in. (Log in)

## ລະບົບການຮຽນ-ການສອນອອນລາຍແບບ e-Learning ມຊ

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- ຄະນະສຶກສາສາດ
- ຄະນະເສດຖະສາດ ແລະ ບໍລິຫານທຸລະກິດ
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- ຫຼັກສູດຕໍ່ເນື່ອງປະລິນຍາຕີວິທະຍາສາດສາຂາລ້ຽງສັດ
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- A00AF221
- A20AR321
- A20LP321
- A20PM321
- A20RS221
- A50AA111

- ▶ ຄະນະສະຖາບັດຕະຍະກຳສາດ
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- ▶ ຄະນະວິທະຍາສາດປ່າໄມ້
- ▶ ຄະນະອັກສອນສາດ
- ▶ ສະຖາບັນຂົງຈີ້
- ▶ ສະຖາບັນຊັບພະຍາກອນມະນຸດລາວ-ຍີ່ປຸ່ນ
- ▶ ສູນສຶກສາທາງໄກ ແລະ ຕໍ່ເນື່ອງ
- ▶ ສູນເທັກໂນໂລຊີ-ຂໍ້ມູນຂ່າວສານ
- ▶ ໂຮງຮຽນພອນສະຫວັນແຫ່ງຊາດ

## 🔗 [A20LP321]-ການຜະລິດສັດແບບປະສົມປະສານ

Teacher: thonglom phommavong

ສາມາດເຂົ້າໃຈເຖິງເຫດຜົນ, ບັນຫາຕ່າງໆ, ຮູ້ແຜນພັດທະນາຍຸດທະສາດຂອງລັດຖະບານໃນວຽກງານກະສິກຳ, ເຂົ້າໃຈໃນວຽກງານກະສິກຳແບບປະສົມປະສານ, ສາມາດອອກແບບວາງແຜນກ່ຽວກັບການເຮັດວຽກກະສິກຳແບບປະສົມປະສານ, ກຳໄດ້ຫຼັກການລ້ຽງສັດແບບປະສົມປະສານ, ເຂົ້າໃຈເຖິງບັນຫາແລະອຸປະສັກຂອງການລ້ຽງສັດແບບປະສົມປະສານ.

## 🔗 [A20PM321]-ການຈັດການທົ່ງຫຍ້າ

Teacher: FAG FAG

Teacher: Aj. Kham Phommachanh

ເພື່ອໃຫ້ນັກສຶກສາເຂົ້າໃຈເຖິງຄວາມສຳຄັນ ແລະ ບົດບາດຂອງພຶດຕະການສັດຕໍ່ການລ້ຽງສັດ, ເພື່ອຕອບສະໜອງໃຫ້ສັດລ້ຽງມີອາຫານກິນໃນເງື່ອນໄຂດິນຟ້າອາກາດທີ່ແຕກຕ່າງກັນ, ເພື່ອໃຫ້ເຂົ້າໃຈເຕັກນິກວິທີການປູກພຶດຕະການສັດແລະການປັບປຸງທົ່ງຫຍ້າ, ສາມາດຄິດໄລ່, ກຳນົດຄວາມຕ້ອງການອາຫານຂອງສັດລ້ຽງໃນແຕ່ລະໄລຍະ ແລະ ຮູ້ວິທີການເກັບທ້ອນໂຮມຫຍ້າແຫຼ້ງ, ຫຍ້າໜັກໄວ້ໃຫ້ສັດກິນໃນເວລາຂາດເຂີນ.

## 🔗 [A20RS221]-ລະບົບການລ້ຽງສັດ

Teacher: Daovy Kongmanila

ແມ່ນວິຊາໜຶ່ງທີ່ຈະຕ້ອງໄດ້ຮຽນຮູ້ກ່ຽວກັບຄວາມແຕກຕ່າງຂອງການລ້ຽງສັດແຕ່ລະລະບົບໃນໂລກ, ຄວາມສຳຄັນຂອງລະບົບການລ້ຽງສັດການວິໄຈດ້ານລະບົບການລ້ຽງສັດ, ການສຳພາດ, ການຕິດຕາມການລ້ຽງສັດ, ການທົດລອງໃນພື້ນທີ່ຊາວກະສິກອນ, ສຶກສາເຖິງຊັບພະຍາກອນອາຫານ, ສຶກສາເຖິງດ້ານເສດຖະກິດ-ສັງຄົມທຳແຮງ ແລະ ອຸປະສັກ, ການພົວພັນລະຫວ່າງການປູກຝັງ ແລະ ລ້ຽງສັດ, ຂໍ້ສະເໜີ ແລະ ວິທີການແກ້ໄຂໃນລະບົບການລ້ຽງສັດ.

## 🔗 [A50AA111]-ສິລະສາດສັດ

Teacher: Lampheuy kaensombath

ແມ່ນການສຶກສາກ່ຽວກັບຮູບຮ່າງ, ການປະກອບສ້າງຂອງອະໄວຍະວະແລະລະບົບຕ່າງໆຂອງສັດໂດຍສະເພາະແມ່ນ: ການສຶກສາກ່ຽວກັບຈຸລັງແລະເນື້ອເຍື່ອຕ່າງໆຂອງສັດ. ລະບົບທີ່ຫຼັກຮ່າງກາຍ, ລະບົບໂຄງກະດູກຂອງສັດແຕ່ລະອະນິດ (Skeleton), ຂໍ້ຕໍ່ກະດູກ ລະບົບເກັບນ້ຳ, ລະບົບ





## **4. Agro ecology/Organic agriculture specific in Laos**

- The organic agricultural concept has been introduced in Laos since 2000 by the Swiss NGO, Helvetas.
- 2005 CIRAD supported the organic coffee production in the south part.
- There are 2 types of organic producers in Laos:
  - Certified organic producer
  - Non-certified organic producer



## Certified organic producer

- There 90 farmer's groups & 17 companies received certification, which represent 1,637 farmers & 3,240 ha.
- The OA land increased by 80% from 2008 to 2015.
- The Gol of Laos targeted 70,000 certified organic producers by 2030 according to the MAF strategy.
- Currently, 5,000 ha of coffee is certified by IFOAM Asia & Fair Trade.
- Only coffee, tea & rice are exported to EU. While the fresh vegetable and fruit are sold in the domestic markets with about 30 tons.

# Certified products of Laos





## **Non-Certified organic producer**

- Mostly supported by NPAs, INGOs & the international project
- Among of 59 stakeholders were identified, of which 50 stakeholders are involved in the Organic Agriculture.



## SWOT analysis for the University-based Farmer Extension Services through an Agro-ecological/Organic Lens

### Strengths

- Has a clear vision and strategy
- Have human resource
- Have teaching & learning programs
- Have laboratory facilitations

### Opportunities

- Increase the linkage between MAF & NUOL
- Need assessment of impacts of AES to farmers
- Increase research support & disseminate findings
- Need research on the perceptions of students, farmers and faculty regarding the university-based extension
- Need improvement of marketing system
- Need expand extension service in agroecology to farmers & students





## Weakness

- Small gap of the price between conventional and organic products
- OA faces with a high production cost
- Lack of impacts assessment of agro ecology extension at the grass root level

## Threats

- Low association between MAF and NUOL
- Teaching time is 80% , while only 20% is for research work No specific research fund for support in agroecology/organic agriculture



# Conclusion

- The main actors of agro ecology extension/organic agriculture in Laos are the MAF, development organizations and private sectors with the use of LEA and AC approaches. They provide training, hand coaching, and some production initiative inputs to farmers.
- FAG, NUOL is only the higher education institute has been supporting in agro ecology extension through teaching, trainings, academic services, and research. They also play role in improvement of curriculum & laboratory facilitations.
- There are 60 agro-ecological initiatives were identified and all of them are involved in organic agriculture.





**Thank you very much for you attention**