

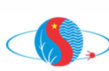
# LMI LUSES

## HIGHLIGHTS, 2012-2016

An International Joint Laboratory (LMI) is an IRD tool which allows several partners to conduct multidisciplinary research projects around a common scientific platform. Created in 2012, LUSES' specificity is its regional dimension based on a network of partners of 7 Southeast Asian institutes and 2 French institutes through 3 French research units.

### OBJECTIVE

To develop research capacity building on the impact of agriculture on soil and associated ecosystem services (nutrient cycling, water cycle, carbon sequestration etc.). This integrative approach is based on a multidisciplinary team (soil scientists, microbiologists, ecologists, agronomists).



IRIS Paris



CIRAD

### ACTING IN PARTNERSHIP

**France:** UMR ECO&SOL: (INRA, IRD, Supagro et CIRAD); UMR IESS. (IRD, INRA, CNRS AgroParistech, Paris VI et Paris XII, ENS), UMR GET (IRD, CNRS, CNAP, CNES, Toulouse III Paul Sabatier).

**Thailand:** Land Development Department (LDD Bangkok). Kasetsart University (KU). Khon Kaen University (KKU).

**Laos:** Agriculture Land Research Centre (ALRC). National University of Laos (NUoL).

**Vietnam:** Soil and Fertilizer Research Institute (SFRI), Institute of Chemistry (ICH).



### SCIENTIFIC ORGANISATION

LUSES organization is based on 3 scientific programs:

**Organic Matter Management (OMM)** : Respective effect of compost and vermicompost on soil and plant. Direction: Nicolas Botinelli (IRD, Vietnam) and Thuy Doan Thui (SFRI Vietnam)

**Environnemental impact of tree plantations** : Characterize the impact of tree plantations (mainly Rubber and Teck) on soil biodiversity and associated soil services (carbon cycle, nutrients cycle). Direction : Alain Brauman (IRD, Thailand) and Supat Isarangkool (KKU, Thailand)

**ECOFILTER** : Effect of land use on stream-ground water interactions in critical zone in tropical agrosystem. Direction: Olivier Ribolzi (IRD, France), Oloth Sengtaheuanghoung (Dalam, Lao PDR)

## CAPACITY BUILDING

LUSES contributed to the reinforcement of partners building capacities by the implementation of :

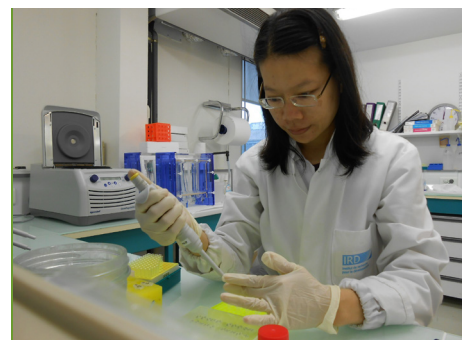
- A biological platform in LDD. This laboratory benefits of modern equipment with an estimated value of 142.000 € co-financed by LDD and IRD.
- A network of soil analysis inter-calibration in the southern region SEA, called SEALNET (South East Asia Laboratory NETwork) which gather more than 19 laboratories.
- More than 20 regional collective training involving around 350 Asian partners: from specific training (on a technique) to more general ones such as data analysis or English paper writing.
- The financial support of more than 20 students including 7 Asian PhD students

## SCIENTIFIC VISIBILITY AND VALORISATION

- Since 2012, LMI LUSES members has been able to lead or co-lead 12 Scientifics projects for a total amount of 1.500.000 € including two French ANR research programs
- LUSES partners has produced more than 20 scientific papers in ISI-WoS journals and has presented 45 oral communications.
- LUSES has participated in the organization of 4 national and international congress and organize an annual meeting every year where all partners are able to present their work.

## IMPACT

- Development of moderns platforms (laboratory and fieldwork) at regional scale
- Partners training to conceptual and methodological aspects of ecology and soil protection
- Development of inter laboratory quality network in South East Asia
- Insertion of partners in international projects
- Development of IRD CIRAD collaboration about environmental impact of tree plantations



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