



SUMMER SCHOOL 2024

Dynamics of Change in Sustainable Agriculture - Enhancing Farming Systems Evaluation to Make Innovation Work

PSU CAMPUS, HAT YAI, AND KHUAN KA-LONG DISTRICT, SATUN PROVINCE

12 May 2024 to 25 May 2024

Prince of Songkla University, associated to the TALENT Programme on Sustainable Landscape Management, offers its 1st Summer School 2024 with the theme “*Dynamics of Change in Sustainable Agriculture - Enhancing Farming Systems Evaluation to Make Innovation Work*”.

The Summer School is a graduate and postgraduate course offered to professionals and students in agriculture, natural resource management, landscape management, rural development, sufficiency agriculture and agricultural extension. The course addresses the challenges of change and innovation in agricultural systems in Southeast Asia, with a focus on small scale farming, based on rubber, oil palm and orchard plantations. Tools will be reviewed for a participatory assessment of these systems in response to the markets, the new needs of the society and to the environment. Models of sustainable transformation pathways will be produced.

Scope and objectives

Assessing innovation dynamics and potential for change in agricultural systems

It is widely believed that innovation grounded in science and technology will transform agricultural production systems to cope with increasing food and commodities demands. This eventually reduces inequality and improves the wellbeing of the farming communities in rural areas where the majority is made of smallholder farmers. Climate change has further exacerbated the challenge of reliability, sustainability and resilience of agricultural systems – calling for more innovative practices and policy interventions to induce transformation and agricultural led industrialization.

Introducing and inducing innovations to benefit a substantial proportion of people, and that can contribute to the transformation of the local agricultural systems facing changes in their markets or their environment is rarely easy to succeed. New crops or varieties of crops are bred to face drier or more unsecure patterns of rainfall. New systems of land preparation, distribution of water, recycling

organic or mineral fertility, or improving quality of the outputs may indeed demonstrate good results in lab or on experimental field, thus offering a high *potential* for transformation of local agricultural systems. However, in many instances, research or development support organizations who promote these technologies face difficulties when they attempt to extend them at all levels (local, national and regional) for inclusive development. The proposed innovation can spontaneously be extended in some areas, or with some specific groups of stakeholders, while they do not show to be effective with others. Finally, the impact of the investments made in generation and then promotion of such innovations may be frustrating.

These difficulties to generate impact of innovations are partially explained by failure of their champions to fully understand the diverse contexts and complexities of farming systems in order to trigger change. Although professionals in agriculture are very critical stakeholders and often initiators or catalysts of agricultural innovations, their effectiveness depends on their capacity to analyze and understand farming and land use systems in the area that they target to transform. Furthermore, agricultural researchers come from diverse backgrounds and their technical training hardly provides the essential expertise in methodologies and tools for impact assessment of innovations based on farming systems analysis.

Both research institutions and development-support organizations more and more require competences for their staff that combine state-of-the-art disciplinary knowledge in agriculture with the capacity to integrate the social, economic and environmental conditions of the production. Looking for sustainable solutions for the future agriculture requires more attention to the interactions between the resources of the environment and the social and economic capacities of the stakeholders present in each region.

- Evaluating the environmental impact of agricultural practices, or assessing the conditions for their extension, raise issues of sustainable access to natural resources, and biodiversity to be mobilized, including in soils,
- While the smallholders' direct economic benefit is a compulsory condition of their sustainability, other conditions can also frame their resilience, such as management, labor requirements, or the risks that they carry for the different stakeholders of the value chains throughout the climate and market instabilities.
- Given the diversity of social conditions at the local level, especially in societies based on smallholders' agriculture, their impact on the various social stakeholders can increase or decrease inequalities in the access to resources.

The Summer School "*Dynamics of Change in Sustainable Agriculture - Enhancing Farming Systems Evaluation to Make Innovation Work*" will provide a **better understanding** of innovation and change at the level of smallholders, especially when targeting economic profitability of the farms and, in the meantime, increasing the sustainability and resilience of these systems. During the Summer School, this challenge will be addressed by linking the theory and methodology with a practical assessment of the innovations being developed –or being promoted – in a small region. In the South of Thailand, particularly in the Khuan Ka-Long district in Satun Province, where a large part of the summer school will be delivered, while the price of rubber (the most important cash crop in the province) has decreased to low levels for the past ten years, plantations have still been maintained, and some of them have been renewed. In the meanwhile, farming systems have been diversified, including by growing new crops not considered before. Even more innovative practices, like mixed cropping of

rubber trees with other species, or different modes of tapping, are being experimented at farmers' level.

The driving expansion of markets for perennials like rubber, oil palm or orchards also encourages plantations in difficult situations. In turn, the expansion of the plantations can challenge their sustainability on the long term. Finally, social and demographic conditions as well as changes in the pattern of migrations can also lead to sharp decreases of the availability of off -farm labor for small farming enterprises. Since a number of the operations in perennial based cropping systems (like the weeding of the young plantations, pest control of the orchards or tapping the rubber trees for quality production) can be highly labor demanding, it can, in turn, also encourage moving back to more extensive forms of production or create an unsecure environment that limits innovation. At the end, such constraints can become more and more frequent in the current context of climate change.

The Summer School will therefore:

1. Provide students and all participants with knowledge and understanding of innovation systems concepts, and of methods and tools for innovation assessment in agriculture;
2. Share experiences among participants' countries on innovation in farming practices, with a particular focus on plantation of perennials –as rubber, coffee and fruit trees- and on cattle breeding, associated or not to the plantations;
3. Offer methodological tools to all participants to assess agricultural systems for their economical and social results, their efficiency, their impact and their sustainability. Special focus will be made on the strategies to cope with uncertain markets (price of the commodities, variable access to labour ...) for those plantations that require a long juvenile period (heavy investment).
4. Equip students and the participants with the practical skills and techniques required for measuring and monitoring impact of innovation within farming systems.

Training methods

Learning will be achieved through active methods by practical fieldwork, participatory assessment of smallholders, interactive lectures, and on-farm surveys. The practical fieldwork will consist in assessing directly local innovations that are proposed or extended spontaneously in Amphoe Khuan Ka-Long, Satun Province.

The training will be delivered in English language.

Participation to the Summer School will require attendance to both on-line and face-to-face sessions, and readiness to fieldwork in hot and remote areas.

Dates and Places of the Summer School

The Summer School will be delivered in blended mode, starting with the online sessions held via Zoom on April 30th and May 7th, 2024, prepared by the Agricultural Innovation and Management Division (Agricultural Development Program) at the Faculty of Natural Resources, Prince of Songkla University (FNR-PSU).

This will be followed a face-to-face session from May 13 to May 25, delivered partly at PSU campus, Hat Yai, Thailand (3 days), and partly (10 days long) in Khuan Ka-Long district, Satun Province, as an on-field practical.

Selected participants should plan to arrive directly at Hat Yai Airport or Hat Yai train station on May 12th, 2024, and leave not before May 25th. Transport from Hat Yai to Khuan Ka-Long field site in Satun province in the period of the training will be arranged by FNR- PSU. Accommodation during the period will be organized for the whole group by FNR-PSU¹.

Target Participants

The Summer School is open to Thai and international students and professionals working in the area of sustainable agriculture or agricultural extension and planning.

- 8 students from PSU, selected by Faculty of Natural Resources (while they can come from other faculties in Economics or Environment or Rural and Community Development, or professionals and NGOs representative registered in non-degree courses);
- 8 students from KU, from both Department of Agricultural Resources Economics (ARE), and Chalermphrakiat, Sakon Nakhon Province Campus and their main international partners in ARE and Management of Natural Resources;
- 4 participants from USU (University North Sumatra) and from other partners from the TALENT network outside Thailand in South-East Asia;

The course is also open to International participants from other Partner Universities or professional organizations in South-East Asia, with the payment of a participation fee of 30000 THB. The fee includes accommodation and food for the participants for the total duration of the course.

Application procedures

1. Graduate students should be under any of the following degree programs:
 - ▷ Agronomy; Tropical Agriculture
 - ▷ Agricultural Economics, Farm management, Agricultural development
 - ▷ Natural Resource Management; Environmental Science
 - ▷ Rural and Community Development
 - ▷ Economics (with strong background/foundation in Agriculture)
2. Candidates from the TALENT Universities network are also requested to apply through the Talent coordinator at their home university. This includes the candidates from

¹ Except in Hat Yai for PSU students.

Kasetsart University who should apply through the department of Agricultural Resource Economics, Faculty of Economics.

3. Candidates from other sources should apply directly to the Agricultural Innovation and Management Division (Agricultural Development Program), FNR-PSU.