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PISAI-Erasmus Plus Project

Report on Trip to European Universities

Developing and Running a Field course on Farming Systems Assessment and Agrarian Diagnosis

Training course 24 September – 4 October 2018

Agreenium & Montpellier SupAgro, France

By

Dr. Buncha Chinnasri, Ph.D.

Dr. Sudsaisin Kraewrueng, Ph.D.

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Rationale – Justification of the training course

In Agriculture and Natural Resources Management, higher education requires an adequate combination of theoretical and hands-on learning.

In the broad domain of sustainable development, or sometimes called self-sufficiency agriculture, there is no ready to use solution. Therefore, the capacity is required for the graduates be able to assess precisely the situation of the various rural stakeholders of their working area, evaluate their ability to integrate complex innovations, characterize and measure the impacts – economical, social and environmental- of the actions and policies that are led. The complex and multidisciplinary character of such capacities is best acquired by active learning, when the students directly analyze one rural situation through different groups working in parallel.

Farming Systems Assessment and Agrarian Diagnosis at Montpellier SupAgro

At Montpellier SupAgro, the MSc *Market, Organization, Quality of Agricultural Services* (Moquas) includes one module that addresses directly these capacities : *Farming Systems Assessment and Agrarian Diagnosis*. The module is given at the beginning of the Programme, in September each year, and it lasts 4 weeks full time. The two central weeks are given as a "field course" where the students actively practice an assessment of the local farming systems, in one place that changes every year. The first week is devoted to the preparation in class, including presenting and critically discussing the theoretical basis and methodological tools that can be mobilized in such an exercise. Finally, the fourth and last week is devoted to finalizing the results and preparing a report and a presentation.

In 2018, the course was given from 17 September to 12 October 2018, with a field period from 24 September 25 to October 4.

Similar objectives in FSCC and PISAI

In the MS *Climate Change and Food Security* programme in SE Asia (Kasetsart, IPB, UGM, UPM, UPLB), the capacity of assessing and analyzing the farming systems, the trends of change and their impacts is a training objective in all training tracks. It is currently addressed during the Summer courses, although it is being included in the regular curriculum that is currently in preparation.

In the MS *Participatory and Integrative Support to Agricultural Initiatives* (MS PISAI, offered by Kasetsart, PSU, CMU and KKU) the same capacity is also developed through 3 different modules, all of them being offered partly on the field.

In both programmes, the question is raised about the methods and pedagogy of active learning that can lead students in agriculture to develop practical and comprehensive capacity of agrarian diagnosis: value chain assessment, farming systems appraisal, impact valuation…

Montpellier's 2018 course as material for observation & pedagogical assessment.

From September 20 to October 4, Montpellier SupAgro invited training staff from the FSCC and PISAI Universities to participate to the field part of the Kasetsart University mentioned above, with the objective that they can observe the pedagogic situations created for the group of students, analyze the synopsis and finally extract the lessons learned which can inspire similar learning objectives at their own institution. The group documented the process observed and is expected to report on the results, so that this can be used as a learning tool afterwards.

Participants to the course were the following:

- Dr Buncha Chinnasri, Assistant to the President Kasetsart University,
- Dr Sudsaisin Kaewruang, Associate Dean for Academic Affairs, Faculty of Agriculture, Kasetsart University,
- Dr Nopasom Sinphursukskul, Lecturer, Faculty of Economics, Kasetsart University,
- Dr Edna Aguilar, Professor, University of the Philippines Los Banos,
- Dr Elaida Fiegalan, Coordinator University Graduate Programmes, Faculty of Agriculture, Central Luzon University,
- Ms Rungrat Sae Yang, lecturer and assistant to PISAI coordinator, Faculty of Natural Resources, Prince of Songkla University,

The course was organized and moderated by Dr Didier Pillot from Montpellier SupAgro.

As it was mentioned above the course was based on the observation of the module *Farming Systems Assessment and Agrarian Diagnosis* that was partly delivered through active learning by students on the field. 37 Supagro's students attended this module in 2018, including 5 students coming from Kasetsart university and 7 other foreign students coming from Latin America and Africa. The module was organized and supervised by several staff from Montpellier SupAgro: Christian Baranger, Pierre Leray, Hugo Lehoux, Frederic Lhoste (50%). One notes that such a module requires a rather high level of tutorship (11 students per staff).

The fieldwork was organized in Comminges, a small (1200 km²) region of the very South of France, bordering Spain. The area includes a wide range of agroecosystems, going from the foot of the Pyrenees mountains in the South where small hills on shale are separated by narrow inland valleys, down to the lime plateaus of the Upper Garonne river basin in the North (also with their valleys). In terms of agricultural systems, different forms of *meat cattle breeding* are dominant on the permanent pastures of the hills at the foot of the mountains, whereas *cereals in rotation with sunflower*, more or less associated with *dairy production*, is dominant in the center and in the north. The agricultural systems are however quite diverse within each agroecological unit, and they all together form an interesting basis for being compared by the students in their assessment.

The region where the module is organized changes every year, so that the students are always in a position where they have to discover new situations. In 2018, Comminges region was chosen for the module for two main reasons:

- The diversity of the production systems that exist in the area, which allows fruitful comparisons. The diversity is between agroecological zones (f.e. between the hills at the foot of the mountains, the valleys and the plateaus), but it also exists within each agroecological zone (f.e. in the hills, cattle or sheep rearing, different meat outputs, association with cultivation of maize for fodder or not, etc…).

- An existing request for study done by a professional organization working for agricultural development in the area. Erables 31 is an association which represents and defends organic farmers in the department of Haute Garonne. It supports (technically) a network of more than one hundred organic farmers and promotes organic ("bio") food products on the local markets (ex: collective restaurants). It employs three technicians. Erables 31 asked Montpellier SupAgro and its students to highlight the more general dynamics of change among the farmers of the Comminges area, beyond what is done in the organic value chain that it already knows well, so that it can better define its strategy for the future. The specifications brought forward were therefore the following:

1. Understand the current rural dynamics impacting the land use and the farming systems
2. Assess the technical and economic results of these systems
3. Identify the strategies (of the farmers) to increase income, resistance or resilience)
4. Compare the performance between farms.

The combination of a need for assessment of the local agriculture, expressed by a professional organization which legitimates the research, and the existence of diversified systems, for pedagogical purposes, are both considered by SupAgro as "must" for choosing the area of the fieldwork.

The methodological steps for the training

Preparation week at SupAgro (17-21 September)

- Rough presentation of the area, and presentation of the Erables 31's request (1h);
- Why do farmers do what they do? Theoretical background of the chosen approach (2h)
- Listing of sources of information about the environment: maps, google images, climatic data, list of farmers (1h);
- The teaching staff organize students in groups of 4 (one of 5), trying to put together different backgrounds and disciplinary origins (1h)
- Each group is commissioned to work on one special source of information (half a day): 3 groups on climatic data, 3 groups on available maps (geographic, geologic, water resources), 3 groups on Google images… (3 h group work + 3 hours feed back session)
- Presentation of the general methodological outline[1] : agroecological zonation, historical survey, pretypology, sampling for surveys, identification and economic assessment of cropping and animal rearing systems, typology of farming systems, economic assessments at the farming system level;
- Group work : choice of the transects to
- The comprehensive interview – Guidelines for the interviews (lecture – 2h)

[1] More details are given in the SEARCA publication : Stéphanie BARRAL and al - Assessing Smallholder Farming: Diagnostic Analysis of Family-Based Agricultural Systems in a Small Region – ed SEARCA, Los Banos, 2012, 146 p.

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The programme of the two weeks fieldwork

Day 1 : Morning : travel to Aspet

Afternoon : Landscape analysis. Transects

Evening : Landscape analysis by groups, preparation of the feedback

Day 2 : Morning : Feed-back by the groups. Identification of the main agroecological zones and characterisations. The groups form 3 clusters : the hills at the foot of the Pyrénées, the central hills, the plateaux. Preparation of the historical surveys per cluster

Afternoon : Historical surveys by groups

Evening : Analysis of the surveys by groups and clusters, preparation of the feedback

Day 3 : Morning : Feedback session about the history of transformation of the farming systems in the three agroecological zones. Elaboration of pretypology.

Afternoon : Surveys by groups: Identification and characterization of the main animal rearing systems (ARS)

Evening : work by groups on ARS inventory. Classification of the ARS per cluster

Day 4 : Morning : End of the group and cluster work on ARS – feed-back session

Afternoon : Surveys by groups : Identification and characterization of the main cropping systems (CS)

Evening : Work by groups on CS inventory. Classification of the CS per cluster

Day 5 : Morning cluster presentations of the CS and ARS and tentative integration per cluster

Afternoon and evening : cross-groups work per type of system identified. Groups share and compare their results. Identification of the pending (remaining) questions to be solved during the next step.

Day 6 : Students get back to the field

Day 7 : Day off (Sunday)

Day 8 : Surveys on the whole farming system economic results assessment.

Day 9 : Work by clusters on the economic data. Some groups may return to surveyed farms to complement missing information

Day 10 : Working on the data : elaboration of the final typology, synthesis of the economic results, comparisons, interpretation of the tracks of change

Day 11 : Preparation of the feed-back session to the farmers, feed-back session and return to Montpellier

Main comments and points of discussion about the pedagogical organization of such a field course

The course provided us with new methods and experiences in arranging the field survey for analysis of farming system. As handling a large group of students in the fields and giving them some motivations and insights on how to do interviews and compile comprehensive data and information is a hard work, this preparation course has been a great help to visualize and predict what to do and happen throughout the whole period of the field work. One shortcoming in this course was the French language used in the field work. This could somewhat hamper quick understanding and comprehension in the discussion with French students. However, it was not that serious as French students could speak good English as well.

Lessons learned with regard to FSCC and PISAI field modules

As mentioned previously, knowledge and experiences gained from participating in this course could provide and prepare us as a good manager, teacher, and trainer in the upcoming the PISAI Module (field work) in agricultural production in March 2019. Without having attended this course before, the preparation of the PISAI Module (field work) in March 2019 could not be this good.