Workshop 5.4: Education in landscape and territory agronomy
Convenors: Sylvie Lardon, Salma Loudiyi, Camilla Moonen and Mariassunta Galli

Livestock farming systems and local development: A review of the multiple dimensions of “Territory”

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A review of the international literature was carried out, to describe how researchers study links between livestock activities farming systems and local development (i.e. “territory”). We highlight three different sets of approaches: the first focus on relations between livestock farming systems and natural resources through landscape / spatial analyses. Secondly, livestock farming systems are analysed through the diversity of the farming systems existing within a territory. The third set of approaches considers livestock farming systems as technical systems structured around human groups. The combination of these three approaches is useful in a landscape and territorial perspective.

A winter school in landscape agronomy and the synergies it created

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This paper presents the experience of a Winter School in Landscape Agronomy for PhD and MSc agronomy students. The interdisciplinary teaching team developed a common conceptual framework accompanied by an interdisciplinary key-word and tools “glossary”. In this paper we present some scientific and educational issues involved in the WSLA and we will show the innovative aspects emerged from this approach. For teachers, the elaboration of common framework and glossary contributed to a better structuring of the WSLA programme; for the students, it made it easier to position new knowledge and to give structure to questions related to the case study.

AREM: An original joint educational program to improve the sustainability of agricultural natural resources and environmental management

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A joint program in Agricultural Resources and Environmental Management (AREM) was developed by faculty at Kansas State University, Manhattan, KS (USA), and El PURPAN, Toulouse (France). The program addresses a critical need to train students on transversal competences in relation to sustainable development with skills and tools that span economic, sociologic, and agro-ecologic disciplines. The philosophy is to learn by doing, even by distance, and to allow international students with faculty members to confront agro-environmental impacts of different fundamental concepts of society. The AREM has proven to be a laboratory for new teaching methods and learning experiences.

Knowing the landscape to understand the territory: A case study in agronomy education

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GUIPA is a trademark created to publish new-conception guides which lead to knowledge of a territory through comprehension of its landscapes. GUIPA also organizes training in reading the landscape following a holistic approach. The training development and the application of reading the landscape technique to a case study in agronomy education are the topics of this paper. The study was conducted on the coastal plain in eastern Liguria. Here the landscape reveals the connection between the agricultural vocation and the history of the area. The knowledge framework that emerges can support local authorities to manage and plan agricultural activities accordingly.
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From landscape agronomy to regional planning: Agricultural management in periurban areas
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We present an initiative of researchers to organize a discussion on agriculture management in periurban areas. It originated from crossing perspectives of landscape agronomy and regional planning. Analysing the changes in periurban areas, we both observed needs about taking into account agricultural issues in planning operations and lacks of knowledge about how to fulfil it. We organised a seminar to discuss the resulting challenges for research and action. The paper describes scientific developments that lead us to set up such a seminar. It shows synergies between different points of view. It presents methodological basis for a future educational programme.

From farm, landscape and territory analysis to scenario exercise: An educational programme on participatory integrated analysis
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We present the educational program built to enable students of Toulouse Faculty of Agronomy to carry out participatory and multi scale integrated analysis of rural territories. The course mimics a professional project management situation on a given case study region. By using formal approaches for participatory analysis (stakeholder analysis, surveys, participatory modelling, landscape analysis, scenario construction ...) students discover how bringing the gap between science and stakeholders' knowledge and that, when addressing problems of social and natural systems, “formulating the problem is the problem”. Training outcomes and key current questions on evaluation of the program effectiveness and organisation are discussed.

When students faced rural and peri-urban realities: An interactive module on “Local integrated management for rural development” case
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This pedagogic experiment is carried out with students chosen by UNESCO chair for the master "Développement et Aménagement Intégré des Territoires" of AgroParisTech Institute. We have two objectives. The pedagogic one is to increase the ability of the students to answer to local expectations and to motivate them in collaborative learning group method in a completely different environment, helping them to become actors of the project. The learning objective is to be relevant on the concrete aspect of the final restitution in front of local stakeholders on the subject of the future of their rural or periurban zone.

Analyzing transition processes in rural landscapes: The farm systems approach
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Rural landscapes are undergoing different processes of transition, related to new paradigms within the agricultural sector and also to new demands from society. From a production oriented demand, society has now evolved into a consumption and protection demand and these landscapes are now expected to support a diversity of non-commodity functions. These questions are discussed in the frame of an intensive Advanced Course, with students from Universities of ENITA Clermont-Ferrand (France) and Évora (Portugal). A transdisciplinary hands-on approach is applied, where mostly agronomy and geography traditions are combined, for the analysis of farmers’ practices at a farm scale.