

The Landscape Ambassador Experience: towards a new educational approach for improving landscape planning and management with farming systems and the European Landscape Convention in mind

Yves Michelin^a, Roland Gustavsson^b, Teresa Pinto Correia^c, Serge Briffaud^d, Anne Katrine Geelmuyden^e, Eva Konkolyne-Gyuro^f, Janez Pirnat^g

^aENITA, UMR METAFORT, Lempdes, France; ^bSLU, Landscape Planning Alnarp, Upssala, Sweden; ^cuniversity of Evora, Largo dos Colegiais, Evora, Portugal; ^dENSAP de Bordeaux, Talence, France; ^eNorwegian University of Life Sciences, Aas, Norway; ^fUniversity of western Hungary, Sopron, Hungary; ^gLjubljana university, Biotechnical faculty, Ljubljana, Slovenia - michelin@enitac.fr

Abstract: Education in “landscape and territories agronomy”, meets great difficulties. In order to facilitate the application of the European Landscape Convention, we imagined a specific educational process integrated in an inter-disciplinary “landscape ambassador” seminar that has been agreed for 3 years as an Intensive Erasmus program in 2006. It has been conceived around five main focus points:

1. Passing from “the landscape in general” to the landscapes related to a specific place where some locals or stakeholders were involved in a project or a question. This case study is the red line that gathers students and professors and creates the conditions of a cooperation.
2. Learning by doing: the questions of the stakeholders are the first key of the program. Lectures and practical exercises are given only at the moment they are useful for breaking a wall that stops them.
3. Crossing points of view on the field with specific exercises that use photographs, drawing, sketches.
4. A permanent educational support with professors that are not dominating the students to give them the truth but close to them to go with and to help them to construct their own opinion.
5. A collaborative student work favored by the short delay between the start of the seminar and the final presentation. Each student has his own knowledge and can teach it to the others.

The paper presents the main results and some methodological aspects related to teaching methods and discussing how this experiment can contribute to bring together landscape architects, agronomists, foresters, geographers, and biophysical engineers. The final perspective of this seminar is to better integrate skills which should not be as separated as today, and to create a new type of advisers capable of giving to the stakeholders sustainable solutions for landscape planning and design in “every day territories”.

Keywords: holistic approach, periferic landscapes, landscape changes, landscape education, European Landscape Convention

Introduction

There are today a number of ongoing processes to challenge which all are dependent on the linkages between the new rurality, landscape management, and the former and rural actors involved. In the context of this and an increased urban society the European Council recently suggested a specific European Convention, which should emphasize a multi-functional and a widely appreciated future European landscape. When starting to focus The European Landscape Convention it is, however, not easy to apply the principles concerning such as different development drivers and landscape management systems combining natural and cultural dimensions, adapted to the local situations and well anchored by locals related to their own expectations. Neither, it is an easy task in the field of agronomy with a territorial perspective, and the ambition to relate it to landscape planning and design.

Landscape architects, agronomists, and foresters all have to get over a difficult “epistemological obstacle”. The first have to incorporate bio technical as well as social processes in their analysis, in order to be able to concretize their project applied to places where people are working and living. Academic reconstructions, ideals and images, which can be of great importance, have to be transformed into landscape situations as something living, lived, and utterly contextual. The latter must accept that their landscape conceptions, an assembly of agro physiognomic units (Deffontaines, 1998)

are not necessary unique and shared by everybody, even not by all the farmers who produce these units.

To deal with the landscape through solution-oriented work, we have considered that it was necessary to change the attitude of the students and to give them new skills, in order to train a new category of advisers, able to understand a local context, to facilitate a dialogue with other disciplines as well as with locals, supporting them to conceive a development project adapted to the ecological and social context and to their expectations. For that, we imagined a specific educational process integrated in an inter-disciplinary "landscape ambassador" two weeks course, that was granted support in 2006 for 3 years as an Intensive Erasmus program. Both students and professors are specialists in agronomy, landscape architecture, forestry, landscape ecology, geography and environmental engineering. Coming from France, Hungary, Norway, Portugal, Slovenia and Sweden, they represent the richness of the European culture.

The aim of this paper is to present the main results and some methodological aspects related to teaching methods and to discuss how this experiment can contribute to bring together landscape architects, agronomists, foresters, geographers, and biophysical engineers, and by an increased training being capable to give to the stakeholders sustainable solutions for landscape planning and design in "every day territories".

Main obstacles we met

In many case studies that we have driven or studied in different countries (Pinto-Correia et al., 2006), we have noticed similar kinds of problems as are described above, problems which, from a scientific point of view, could be categorized in three main categories.

First, if the rural landscapes are primarily the result of farming or forestry activities, this doesn't mean that farmers or foresters are interested in producing such kind of future landscape. Thus, they don't necessarily take care on its conservation and other quality values when they adapt their practices to the market laws. From a theoretical point of view, if the landscape concept interests agronomists, foresters or biophysical engineers, they reduce it to its biophysical dimension (the spatial extension of an ecosystem, a combination of patches inside a matrix, a part of an area upon which farmers or foresters apply specific practices). Their perspectives are sometimes missing the local representations, and values that might be added or even leading values for people. Moreover, they take a position outside the action in concern or the area that they study because they consider that this reality exists apart from them (positivistic approach).

On the other hand, social scientists are more able to define how people think and speak about the landscape in general. To a lesser extent they are trained to understand and respect the local contexts, and aspects which rather belong to the few unique areas and situations than the common for larger areas and periods. Furthermore, they are more trained in analyzing than in solution-findings. Some of them use photographs, sketches, walks on the field and by this prolongation obtain better contextualized results. Yet, the correspondences between landscape demands and public policies remain problematic because these approaches do not deal with the processes that drive landscape changes. They are a good help in deepening the understanding backwards, but they are often too little focused on the forward-directed. Finally, the communicative perspective is given a major intention in the European Landscape Convention, and should also be given a major attention here. All these specialists do not necessarily take care of locals opinions in their research or in their practical work, and if they want to pay attention to these opinions, they do not know how to deal with them. They can all be described as primarily experts with a training on top-down approaches.

More than most others, landscape architects and related disciplines, are trained in identifying spatial expressions, and by design and planning make suggestions to changes of physical and biological patterns in local landscape contexts. However, when doing this, most schools are today more interested in studying and producing overall shapes, colors or landscape structures than to relate them to the local practices that have produced these spatial aspects and patterns. No doubt, there is a risk with an increased urban society that such spatial patterns become too "shallow" in the human understanding, and too little linked to production and multi-functionality. Thus, when they work on landscape design in rural areas, they can find difficulties to connect their artistic creation with local expectations. From a theoretical point of view, the landscape appearance is a subject of study. Here, they partly link themselves to a technocratic science, partly to human, social, but also natural science. As disciplines they are both backward-looking and trained to identify possible solutions for future.

All these reasons put together explain why we have considered that the most urgent task was to start an educational process that contributes to the bridging of the gaps in the minds of these different specialists: the gap between disciplinary approaches, the gap between the specialists and the stakeholders involved in the field at local scale, and the gap between the analytic traditions and the design oriented, solution-directed.

The landscape ambassador experience

An idea that has matured slowly

The origin of this project has at least 3 roots :

1. From a theoretical point of view, it is a result of some interrogations developed at the end of the 1990th by researchers in landscape ecology (Naveh, 2000) who asked for a better connection between natural and human sciences in a holistic approach of landscape studies. The same type of questions was developed by several agronomists as Deffontaines and geographers (Bertrand, 2000). Also more recent literature shows the need to change approaches from scientific education in order to satisfy society expectations, both in general (Nowotny et al., 2004) and in the field of landscape sciences.

2. In the political sphere, at the same period, hard discussions were occurring about the preparation of the landscape convention. In France, the Environment Ministry was driving a specific research program "public policies and landscape" which started in 1998 (Berland-Darqu e et al., 2007). Among all these works, one criticized the fact that the landscape was taught in agronomic studies in a very biological way that did not permit to integrate other locals opinions (Dussutour, 2002). Guissipelli and Fleury (2005) demonstrated that when the landscape analysis was driven by landscape specialists, the propositions of actions were often normative and top-down oriented while if a participatory approach was developed during the process, locals were able to propose solutions better adapted to their local context. Not the least, the authors were complaining about the lack of knowledge in the community of advisers.

3. In our research practices, several of the authors, involved in the group of university professors who started the landscape ambassador course (The PERISCAPE Group) had already earlier practical experiences in landscape education as an interdisciplinary and solution-oriented, effort. The Reference Landscape Approach (Gustavsson and Peterson, 2003) and The Landscape Laboratory Concept (Gustavsson, 2004, Gustavsson et al., 2005, Tyrv inen et al., 2006), the participatory agricultural landscape approach by Michelin and Joliveau (2004), the use of disposable cameras for approaching landscape preferences (Michelin et al., 2006), the educational efficiency of games (Michelin et al., 2006) have inspired the educational program of the Landscape Ambassador course.

Moreover, studies as the assessment of relations between the dynamics of land cover, the agricultural sector, and the community in Portugal, for the Ministry of Agriculture (Pinto-Correia et al., 2006; Pinto-Correia and Breman, 2008), and landscape character assessment studies of Konkoly-Gyuro (konkoly-Gyuro et al., 2006 ; 2007 ; Palang et al., 2005) ; (Cancela d'Abreu et al., 2004), and landscape dynamics (Kobler et al., 2004 ; Pirnat, 2005) should also be included here, setting up a pre-platform for The Landscape Ambassador Concept.

At the beginning, the PERISCAPE group started by having informal discussions on the field during several meetings of the PERISCAPE group. We took the opportunity to receive the support of regional funds in Auvergne region, in France, to start in 2004 taking through a first intense course with 28 students coming from 4 countries representing 4 disciplines. The year after, we were able to welcome more students in France (35 coming from 5 countries) with a good support from the regional authorities. With these 2 tests, we obtained an ERASMUS intensive course agreement in 2006 for the coming three years. As the funding was adequate, we decided to organize the course each year in a different country. It has been taken through 2006-07 in Slovenia, 2007-08 in Portugal, and is planned for autumn 2008-09 in Sweden.

Short description

The teaching method aims at raising students' understanding of the complexity of landscapes. That is why we always have organized the course around a case study work where a local demand exists.

The concrete main question which is raised represents the red thread of the program. The chosen study areas typically have multifunctional landscapes with very complex and interwoven maintenance practices and change dynamics, involving agriculture, nature conservation as well as recreation and tourism interests, rural living, city expansion, and economic development pressure. Through solution-oriented interdisciplinary group work, ways to integrate knowledge and approaches from different European countries and disciplines that all have stakes in the concept of landscape are practiced.

the topics

The main topics of the intensive course have been assessed from different points of view. In 2004, we concentrated our investigations on landscape planning in remote rural areas in Auvergne. In 2005, the “peri-urbanity concept” was the focus theme and we applied it on the Auzon valley, close to Clermont-Ferrand. In 2006, the main question was what borders mean in the landscapes of Dragonja valley, at the border of Slovenia and Croatia. This year, we analyzed the multifunctionality of a diverse landscape around a small town, where small scale peri-urban mosaic and large scale Montado areas can be found, in Southern Portugal. Next year, we will deal with landscape and local participation, in Blekinge region (Sweden).

Consequently, the main questions and the thematic groups have varied to some extent each year as a way to test different organization approaches in the educational training, but also as a way to adapt to each territory. The respect and the understanding for the cultural and natural differences have been given a high priority; demonstrating for the students the deeper meanings of regional and local differences in identity. Stating that all territories have their own potentials and problems makes it for us very interesting to stress creativity as part of the learning process, avoiding unnecessary simplifications and standardized solutions; and in an expansion, allows us to evaluate the efficiency of our educational process in different conditions. Moreover, as an essential part, it obliges us to change our lectures and seminar themes each year.

The team of the teachers have been designed as a way to create a core group, which crosses disciplines and countries, stressing the consistence from year to year as a way to permit continuity to grow by the chance to deepen the understanding of each other and the understanding of the course as such. Parallel, this has each year been complemented by bringing in one or two new teachers, and a series of guest lectures and supervisor bring in “fresh blood”. As a special tool former landscape ambassador students have been taken in to assist when managing the groups and solving the small technical issues during the intense courses.

The program

Special exercises have been designed to create an awareness amongst the students of each discipline’s special expertise and potential contribution to the group work. Four parts of the program are here considered as of special importance and shortly commented:

1. The introductory part, aims to make the students reflect on people and their relationships to different kind of landscapes ; for what they consider as home landscape, working landscape and favorite landscapes. It has to be prepared before arriving. Each student has to answer some questions related to his/her landscape preferences by taking photos with a short comment. Every workshop starts with a “hands-on” and “participatory-lead” inventory of the landscape, through spontaneous and arranged interviews with local residents, land owners and practitioners of different management regimes, as well as through moving around in the study area on foot or by car, sketching and photographing, followed by continuous group discussions. It is a day when the students and the teachers all together and without computers research the chosen area in a mixture of a series of organized outdoor meetings with a number of chosen people in a direct connection with all the senses. The “blind landscape exercise” is running the second day, outside in a view point of the study area. The students are divided in national and professional groups and use their mother language. One of them stays in front of the view and describes it to the others, turned back to the scenery and not seeing it. Based on what are explained of the view just using the language to describe, the rest of the group has to draw a sketch of what they have understood. During a debriefing as a follow up, students and professors debate about the reasons why differences exist between the actual landscape and the sketches. At the end, this exercise reveals to the students the relativity of landscape knowledge, the many angles that often is a fact, shift and where many can be as relevant as the others and how they have to pay attention to this fact during their discussions between them and with the locals.

2. “A series of connected morning lectures” which serves as introductions and common discussions. During the course, each of the teachers shares his or her particular experience and theoretical

concepts with the students and the other teachers. The schedule is very flexible and we try to adapt it to the evolution of students work. Topics that are addressed are farming practices and the Common Agricultural Policy, landscape ecological principles, landscape aesthetics as a philosophical tradition, landscape characterization and representation methods and interviewing techniques. In addition, others, often local experts, are invited to give talks concerning the study area. However, we try not to spend too much time on general theories. In fact, the main part of the seminar is dedicated to the case study, and the direct experience with their own senses.

3. Students work in small groups mixing nationalities and disciplines. The topics that we develop depend both on the yearly questions and on the local organization demand. The workshop is concluded with a final presentation of the groups' work to all the workshop participants and to invited local residents, municipal and regional officials and stakeholders in the area. We try to have the presentation both in English and in the local language. Before leaving, we spend half a day for a methodological and theoretical debriefing. Every part of the discussion is driven by the professor with his own students. The other part gathers all students and professors for a global conclusion. After the end of the course, students have to fill an evaluation form. They also have to write a synthetic conclusion, in which they develop one particular point (theoretical or practical) on a subject they are interested in. In most of the universities that have been participating in the course, the students and their professors present the seminar and their work to their colleagues and officials.

4. The lectures, student work, photographs and movies, and final presentation are gathered in a DVD that is given to each participant and to the local institutions. We try to motivate local media to assist at the final presentation (by interviewing persons connected by the local network, writing articles on newspapers, inviting posters on the shops, etc.) Moreover, during the seminar, we activate a specific blog catching some impressions of the course with some indication of the work, day per day and articles written by students or professors about their feeling, opinion, ideas etc.

Main results

For the students

This part is a short synthesis of the analysis of the evaluation form. These answers have helped us to improve our course. Even if some are complaining not to have reached their goals, the general opinion is a great satisfaction. The two weeks of concentrated work encourage synthesizing the different and relevant concepts into what could be called a growing landscape management "wisdom", and its application in the students' internal group communication and final output. The students become aware of typical communication difficulties between different knowledge cultures and their level of disciplinary self-awareness and self-reflection is raised considerably. A good indicator of their level of satisfaction is the fact that it is very easy to find former students to be the helpers one or two years after, when the seminar takes place in their mother country.

For the locals

We have noticed a major interest for the experience. The local stakeholders appreciate a lot the international dimension. Some locals, especially in remote areas, told us that if foreign students were working in their living place, that was a demonstration that this local place had a minimum of value. Moreover, the student's work has sometimes contributed to facilitate the discussions between locals. In fact, their work, even if it was not perfect, was in many cases like a mirror that reflected other opinions in a way that was acceptable by all. The workshop advocates the attitude that landscape should be regarded and maintained as an arena of social involvement and a place of constructive interchange between different management regimes, between city and countryside, as well as between man and his surroundings. It challenges the practical application of the European landscape convention, and shows some main directions which should be seen as possible ways to implement it in an intended way.

For the professors

This experience has been a great challenge. Some of us were not used to apply a participatory way of teaching, where the students are very active and sometimes critical. At the beginning, we didn't agree on how to manage the groups and for the students, it was surprising to discover that the professors didn't always have the same opinion. However, the students were between us, and that helped us to cross over these differences and to search to understand why we disagreed. Was this due to concept

oppositions, to educational differences, to misunderstandings? At the end, we have improved our teaching methods and we better know how each can complete the work of the others.

Discussion: some learning from an educational point of view

From an external point of view, the final production resulting from the work of the students is impressive. Every year, in a short time, the group always has been able to produce an analysis, to expose some tendencies or perspectives, to identify a series of relevant and interesting strategies, images and some detailed solutions and to submit their work to a public discussion. So we can consider we have obtained what we were expecting. Even if we don't have a scientific feed-back of the impact of this seminar on a long-time period, it is possible to make the main conclusion that many of the former "landscape ambassador students" have changed their approach after the course into a more applied oriented perspective. Furthermore, they tell us, after the end of their studies, that this landscape ambassador experience had changed their way of thinking and their way of working. Now, after a 4 years experience, we can propose some main results from an educational point of view.

Conceptual aspects

Landscape as a visual language

As the course is done in English, a foreign language for all the participants, all are at the same level. That facilitate the exchanges but that is also a subject of conflicts because it is difficult to translate in English some words that have specific meanings. For instance the French word "enjeu", always used by landscape architects didn't mean anything for the Scandinavian participants. Another difficulty arises from our lack of English knowledge. How to express precise descriptions with too few words? Facing the problem, one solution has been to use non verbal landscape descriptions such as drawings, sketches, 3D diagrams, photographs, and movies. The students have discovered that images could be more efficient for a discussion than words. The beginning of a landscape mediation has been reached.

Landscape architecture differs from one country to another one

When we started our course, we thought that each discipline had its same methods and values. However, we noticed that it wasn't so simple in the practice, especially for landscape architects who where coming from 5 countries. Art references, the drawing skills, learning traditions, the attitude based on a dialogue with inhabitants or not, hadn't the same importance in each country and these differences created some misunderstandings. Other groups, like the Slovenian foresters, raised their understanding of how different forestry can be in different parts of Europe. In some countries forestry can be a leading activity also in conservation on former agricultural land, while in other countries it is mainly restricted to timber, paper and energy forest output.

Holistic landscape perception / thematic professional analysis

On the other hand, the specialists of natural or biotechnical sciences (ecologists, foresters, agronomists) have discovered that they were not able to consider all the dimensions of the landscapes perception. During their discussions with the inhabitants, who were every time mixing and combining biophysical processes, landscape feelings and representations, they needed to widen up their analysis and include other factors as well. That has become particularly obvious when preparing scenarios.

Educational processes

The relevance of a more holistic dimension of the landscape

In fact, the students did really understand the complexity of the landscape by the way they became part of the case study work. More than theoretical lectures, this experience gives a concrete dimension to concepts that are so difficult to integrate for young engineers or researchers in a day to day teaching situation within the universities and the polytechnical schools. Of course, lectures are important, and so are scientific papers. But these approaches, as the dominating academic reconstructions of reality, have to be balanced with other approaches which much more directly creates meetings between students, teachers, and all sorts of actors intervening in the landscape

situations in contexts which more easily and deeper can be understood. This message is maybe the most important lesson the landscape ambassador course brings to us.

Interactive learning approaches need a strong and well organized structure

When considering the difficulties related to the landscape conceptions, which showed to be different from one country to another, we had to deal with an educational system that is unusual for many students. We have taken profit of some educational experiences, developed during the 1960th and 1970th through a series of today classic works (Freire, 1974), which conceived our program around the following five main focus points:

1. *the case study work as a gathering process*: it is a good way for passing from “the landscape in general” to “the landscapes related to specific places and people” where some locals or stakeholders become involved in a project or a question. It is the red thread that gather students and professors and creates the conditions for a cooperation, even if somebody can have sometimes disagreements with the others.

2. *learning by doing*: the questions of the stakeholders are the first key of the program. Lectures and practical exercises are seen as complementary, and are interacting as best at the moment when they both are useful for opening up essential visions, breaking a wall that stops the students, or by making a shift so things are brought forward again. Not all lectures are understood at once, but become “little by little ” more understood by their combination to practice as a follow up. The place of the lectures is sometimes not understood until the final presentation, and in some few cases not even at this moment, which means that these parts of a lecture has to be reconsidered for the next year.

3. *Crossing the points of view in the field* with some specific exercises that use photographs, drawing, and sketches. The illustrations have become a central part of the instruments which have become used, improving both articulation and making the communication more explicit and concrete. The blind landscape exercise has been very efficient to motivate the students.

4. *A permanent educational support*. Professors changed their attitude. They were not here to watch over the students to give them the truth but close to them to go with, to become integrated as experienced persons and to help them to construct their own opinion.

5. *A collaborative student work*. Each student has her/his own knowledge and can teach it to the others. The short time period between the start of the intensive course and the final presentation to the locals has encouraged them to cooperate.

Practical application

At least, we want to focus on four practical points that we consider as a part of the good results that we have obtained:

The importance of the place for the project area and the accommodation

Each time, we have organized the course in motivating places (old monastery, famous natural landscapes, historical places...). It seems to be anecdotic to speak about the stay conditions. It is maybe not the most essential, because the students work a lot, all the time together, that the every day life can motivate them if the place is attractive. But still, maybe. The strong sense of the landscape as a place which is appreciated by the many is no doubt an important part. So is the fact that all goes together in the site chosen for the accommodation: the study area, living, eating, and enjoying life by social events, are not separated. That is one of the most basic key ideas behind the course ; to keep it all together opposing the scattered world of today.

The importance of the communication

Communication plays a crucial role in bridging the gaps between the different approaches and schools. The communication has several levels and layers. In the intensive course, there is a necessity of working by communicating between the different students with different education and culture. Teachers and students as well as students and locals, teachers and locals communicate intensively with each others during the course. The result is the connection and the combination of the interdisciplinary expert views and the local views. The participant students gain an experience that might influence their future professional life – they will be able to put their own professional concepts

into a real territorial context and can see the other side of the coins. The seminar increases the locals' awareness of values and problems, the interconnectedness and the impacts of the land-use activities.

The role of the helpers

The "former landscape ambassador students" have taken an important part of the success because on one hand, they are helping managing all the practical things and on the other hand, they are able to give confidence to students when they are lost, and they also are fundamental in helping the students in driving the enquiries and interviews in the language of the country where the course takes place, and in analyzing the data collected.

The necessity of locals and professors involvement

To conclude, we insist on the fact that this kind of course is difficult to manage and it needs a lot of energy both for students as well as for helpers and professors. It is not possible to conceive it without a personal involvement of all the managers. It is one of the reasons for students to accept to be put in an "intellectual danger" and at the same time feel a deep sense of trust, a combination that could be seen as a first step of a learning process. If landscape as a frame is conceived as a state of spirit, the next steps are on the way and will become fruitful. This is definitely true when considering teaching landscape planning in a participatory, interacting and overlapping process in between landscape and the human being, in between different experts and locals, in between different educational schools and disciplines, and in between different cultures of Europe.

Conclusion : how taking into account the landscape in rural areas?

With this four-year experiment, we believe we have now enough distance and experience to propose a general educational frame based on a case study work. As it is presented here it, fitting into a farming frame, it is organized in 4 steps, applying specific methods that move students in different attitudes:

Step 1: the landscape as a key enter and experience as both insider and outsider

The work starts with very classical methods. Each category of students observes and describes the landscapes with its own preoccupations and methods. The main innovation comes from the mix of origins and disciplines in the groups, that force students to explain to the others what they do.

1. Landscape architects describe what they perceive at different scales. They notice the diversity of aspects, search for lines or structures, search elements and patterns which reveal meaningfulness, and importance of past, present and future, and try to identify the spirit of the place. They produce many representations (such as photos, sketches, drawings, and 3D diagrams)

2. Specialists of natural and biotechnical sciences (agronomists, foresters, environmentalists...) use the landscape as a key to ask questions about land uses and biotechnical processes, facilitating for us to see and understand processes, problems and potentials. This territory entrance is not so usual for them and they often need help but it opens their mind to solution-directed approaches and spatial interest, as well as to non-technical approaches.

3. Social scientists (geographers etc.) are used to deal with people and their opinions through enquiries, and use the landscape as a key to understand how people relate to their environment. In a territory approach they are progressing at the same time in the sense of assessing the ongoing processes and are there to reveal what is shaping these landscapes.

For all of them, landscape is also a starting point for discussing with inhabitants and visitors about the main landscape characters.

Step 2: the landscape as a combination of elements

With an analytic process, we propose the students to divide the landscapes in a collection of elements. On one hand, these elements have a specific appearance, and are located in specific places. To establish this list, the students work on the field and can use GIS or maps.

On another hand, the students try to find with which kind of functions these elements are related. For that, they make interviews, they go on the field, they ask experts. They try to discover how the appearance of these elements change in time, due to natural processes or to farmers or foresters practices. It is a usual way of working for foresters and agronomists but it might be more difficult for landscape architects. In this step, those who seemed to be lost in the first step are now the teachers of those who were comfortable before.

Step 3: creating landscapes models related to farming types

The second step has revealed the great variety of aspects in the landscapes, related to the diversity of practices applied on this territory. To go out of this complexity that disturb the students, the 3rd step aims to find proximities and trends. Students try to define landscapes models as a specific combination of landscape elements and they relate them to farming types based on their practices. The landscape models become more understandable with the help of landscape architects who produce 3D diagrams. The farming types are explained by the agronomists. The environmentalists can evaluate the impact of the practices on the nature quality and give the landscape architects the information for representing the landscape in a scientifically correct appearance. This step is hard for all the students because it requires them to take distance with their observations in an unusual way. The more they are disturbed, the more they will learn from their collective work.

Step 4: landscapes trends and challenges as a medium for planning

The last step deals with the locals opinions in order to help inhabitants, technicians and stakeholders to think about their future and to the possibilities to drive it in a direction that they expect. From an educational point of view, this step creates the conditions of a positive stress that involves the students. On an other hand, it is a way to validate students analysis. At least, the 3D diagrams and all the documents produced by the students are more powerful than a lecture to demonstrate the interest of a holistic approach of the landscape.

To conclude this paper, we must insist on the fact that our educational work is still in process. If we can consider that this frame is now running well, many points need yet to be analyzed on an even longer period but we can consider that this experience is on the way towards a more holistic and practical method to teach such a complex thing as landscape planning and farming practices.

References

- Berlan-Darque M., Luginbuhl Y., Terrasson D., 2007. *Paysages : de la connaissance à l'action*, Editions QUAE, c/o INRA, Versailles.
- Bertrand G., 2000. Le paysage et la géographie : un nouveau rendez-vous, *Treballs de la Societat Catalana de Geografia*, 50, volume XV, Barcelone, 57-68.
- Cancela d'Abreu, A., Pinto-Correia T. and Oliveira, R. (Eds), 2004. Contributos para a Identificação e Caracterização da Paisagem em Portugal Continental., *Colecção Estudos* 10, DGOT-DU, Lisboa.
- Deffontaines J.P., 1998. *Les sentiers d'un géoagronome*, éditions Arguments, Paris.
- Dussutour L., 2002. La construction pédagogique du territoire. Apprentissage des réalités locales et amnésie du politique dans l'enseignement agricole, *Ruralia*, 2002-10/11, [online] URL : <http://ruralia.revues.org/document301.html>
- Freire P., 1974. *Théâtre de l'opprimé*, François Maspero, Paris.
- Guisepelli E., Fleury P. 2005. Représentations sociales du paysage, négociation locale et outils de débats sur le paysage, In Droz, Y., Miéville-Ott, V. (Eds), *La polyphonie du paysage*, Neuchatel, Presse Polytechnique et Universitaire Romande, 179-205.
- Gustavsson, R. and Peterson, A. 2003. Authenticity in landscape conservation and management: The importance of the local context, in: Palang, H. And Fry, G. (eds.), *Landscape Interfaces Book*, Kluwer academic publishers. Dordrecht, 319-356.

- Gustavsson, R. 2004. Exploring Woodland Design: Designing with complexity and Dynamics - woodland types, their dynamic architecture and establishment in Dunnett, N. & Hitchmough, J. (eds.) *The Dynamic Landscape; Design, Ecology and Management of Naturalistic Urban Planting*. Spon Press, London, 184-215.
- Gustavsson, R., Hermy, M., Konijnendijk, C. and Steidle-Schwahn, A. 2005. Management of Urban Woodlands and Parks - searching for Creative and Sustainable Concepts, in Konijnendijk *et al.* (eds.), *Urban Forests and Trees; A reference book*, Springer, Berlin, 369-399.
- Kobler, A., Cunder, T., Pirnat, J., 2005. Modelling spontaneous afforestation in Postojna area, Slovenia, *Journal for Nature Conservation*, 13, 127-135.
- Konkoly Gyuró É., 2007. The Pannonian Great Plain a flourishing garden? Water as a key to the history and future of the central lowlands in the Carpathian basin, in Pedroli *et al.* (Eds), *Europe's Living Landscapes. Essays Exploring our identity in the countryside*, Landscape Europe Wageningen/KNNV Publishing Zeist, 295-308.
- Konkoly Gyuró É., Tirászi Á., 2006. How do top down and the bottom up approaches reflect landscape management in Hungary?, in Bunce, R.G.H. and Jongman, R.H.G. (Eds), *Landscape Ecology in the Mediterranean: inside and outside approaches*. Proceedings of the European IALE Conference 29 March – 2 April 2005 Faro, Portugal. IALE Publication Series 3, 217-226.
- Michelin, Y., Joliveau T., 2004. Le paysage au service de démarches participatives et prospectives de développement local : enseignements d'expériences de recherche-action conduites dans le Massif central, . in Michelin Y. (Ed), *Paysage et développement local : expériences et recherches innovantes dans le Massif central*, Revue d'Auvergne 573, Clermont Ferrand, 233-262.
- Michelin M., Depigny S., Michelin Y., 2006 . Can a game put engineering students in an active learning mode : a first experience in sustainable agriculture teaching, in *Proceedings of IETA2005, TeNe2005, EIAA2005 Advances in Computers, information, and systems sciences and Engineering*, Doordrechts, Springer, 343-349.
- Michelin Y., Paradis S., Lelli L., 2006 When inhabitants photograph their landscapes to prepare a local sustainable development project : new perspectives for the organisation of local participative discussion groups, *Journal of Mediterranean Ecology*, vol. 6, N°.1,19-32.
- Naveh Z, 2000. What is holistic landscape ecology? A conceptual introduction. *Landscape And Urban Planning* , 50,1.3, 7-26.
- Nowotny H., Scott P. , Gibbons M., 2004. *Re-thinking Science – Knowledge and the Public in an Age on Uncertainty*, Polity Press, Cambridge.
- Palang H., Printsman A., Konkoly Gyuró É, Urbanc M., Skowronek E, Woloszyn W., 2005. The forgotten landscapes of Central and Eastern Europe, *Landscape Ecology*, 20, 645-655.
- Pinto Correia T., Breman B.C., Jorge V., Dneboska, 2006. *Estudo sobre o Abandono em Portugal Continental – Análise das dinâmicas da Ocupação do Solo, do Sector Agrícola e da Comunidade Rural. Tipologia de Áreas Rurais*. Universidade de Évora / Ministério daAgricultura, Lisboa.
- Pinto-Correia T., Gustavsson R. & Pirnat J., 2006. Bridging the Gap between Centrally Defined Policies and Local Decisions . Towards more Sensitive and Creative Rural Landscape Management, *Landscape Ecology*, 21, 3, 333-347.
- Pinto-Correia T., Breman B., 2008. The new roles of farming in a differentiated European countryside: contribution to a typology of rural areas according to their multifunctionality. Application to Portugal. *Regional Environmental Management (in press)*.
- Pirnat J., 2005. Riparian vegetation – a link between an artefact and a landscape palimpsest. in Konkoly Gyuro E. (Eds.).Greenways, conference presentations. Sopron, 16 –17/07/ 2004, 23 – 29.
- Tyrväinen L., Gustavsson R., Konijnendijk C. & Ode Å., 2006. Visualization and landscape laboratories in planning, design and management of urban woodlands, *Forest Policy and Economics*, 8, Elsevier, 811-823.