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PRESERVATION OF NATURAL AND
LANDSCAPE VALUES IN THE BIOSPHERE
RESERVE "TERRAS DO MIÑO" THROUGH THE
PROMOTION OF LOCAL FOOD SYSTEMS

LOOKING FOR SOLUTIONS FOR A DECLINING TERRITORY

*MÁSTER IN SUSTAINABLE LAND PLANING
UNIV. SANTIAGO DE COMPOSTELA*

International students workshop celebrated in Lugo from Wednesday 5th to Friday 7th of March of 2014.

ORGANIZED BY:



University of Santiago de Compostela

Master on Sustainable Land Planning



*University of Applied Sciences
of Van Hall Larenstein*

SUPPORTED BY:





Students of the University of Santiago de Compostela (USC) and of the University of Applied Sciences of Van Hall Larenstein from the Netherlands (VHL) met together for the first time on Wednesday 5th of March. During 3 days, the students formed several working groups within the framework of a workshop on the *Preservation of natural and landscape values in the biosphere reserve "Terras do Miño" through the promotion of local food systems*. At this point a study area was selected which is representative of the problems that can be found in the biosphere reserve with the aim to find solutions which can be extrapolated, through a particular case.

The first thing which was done was putting forward a workshop proposal with a practical orientation on the territory to be studied. 15 students participated in total in the intensive course, 6 of them from the

Dutch university accompanied by two of their teachers, and the other 9 students from the Master on Sustainable Land Planning which is held in the Campus of Lugo. From the 9 students that are trained in the city of Lugo, only four were Galician. 3 of them were from Ecuador, another one from Mexico and another one from the Czech Republic.

The first step before starting the analysis of the study area, was creating 3 working groups which were kept until the end of the workshop.

This was the second workshop of these characteristics that the Master on Sustainable Land Planning developed with the Dutch university of Van Hall Larenstein and, as the previous one, it was oriented to offer the participating students the opportunity to work in an international and multidisciplinary environment where they could achieve new competences from their participation in an experience which was close to the real situations they will find in their careers. The workshops are intended to offer new perspectives to Galician territorial problems through the contribution of new visions thanks to the cooperation which is established with the teachers and students from other countries.

In the last three years of the Master in Sustainable Land Planning, the students were offered the opportunity to participate in international workshops with students from up to twelve different countries which were celebrated in places such as Portugal, Greece and the Netherlands. In these events, territorial problems ranging from adaptation to climate change, preservation of natural values, rural development and the promotion of local food systems were treated. In the same time, the Master in Sustainable Land Planning has invited expert teachers from Norway, Germany and the Netherlands, to share their experiences in their countries with the students on topics such as urban planning, territorial planning, land tenure and ownership management or the resolution of territorial conflicts.

THE STUDENTS GAIN A DEEPER KNOWLEDGE ON THE CHARACTERISTICS OF THE BIOSPHERE RESERVE 'TERRAS DO MIÑO'



The first thing that the Galician students commented with their Dutch colleagues was the change in the weather that they had the good luck to experience. Galicia was under important adverse meteorological phenomena in the previous weeks which left a landscape of flooded rivers and lands. It was the first week without rain since the beginning of the year 2014, although the footprints of rain were evident in the Interpretation Centre of the Biosphere Reserve next to the Rato river, in Lugo, where the students received the first insights on the study case and the working methodology.

The biosphere reserve "Terras do Miño" reaches a surface of 363.668 ha, which entails the 39% of the territory of Lugo province. The biosphere reserves constitute a global network of natural areas which were created by the UNESCO, aimed at contributing to the preservation of the biodiversity of natural elements and the promotion of socio-economic development of local population. USA is the country with the highest number of declared biosphere reserves in the world, followed by Spain.

Terras do Miño is also known as "Reserve of landscape and water" and was the first biosphere reserve declared by UNESCO in Galicia, in the year 2002. The extension of this biosphere reserve makes it the biggest in the region of Galicia and the second biggest in all the Iberian Peninsula. It is composed of 26 municipalities of the higher basin of the river Miño, among which can be found the municipality that holds the capital of the province: Lugo.

The biosphere reserve is a space that hosts vegetal and animal species, some of them under extinction risk. In the area of the biosphere reserve there are 32 habitats of community interest which were identified. Furthermore, Lugo province is the only one in Spain where more than the 55% of its territory is declared as biosphere reserve having 3 areas declared such as: Terras do Miño, Ancares e Río Eo, Oscos e Terras de Burón.

APPROACH TO THE STUDY AREA: CELA AND TABOI



Before entering directly into the study area, the students participating in the workshop received abundant information on the places where their work would later take place. The Land Laboratory of the University of Santiago de Compostela elaborated an introductory text to the territory they would have to study and some maps which were used as starting information. In this text, it was explained the importance of the biosphere reserves to test and prove innovative approaches to sustainable development ranging from local to international scales.

Through the observation of several maps, the students could see how the Terras do Miño biosphere reserve was composed by two big areas: the mountains of Serra do Xistral on the north and the inland plateau of Terra Chá, which is crossed by the Miño river and its tributaries. This plateau is in addition characterized by the dominance of the *agras*, a kind of open field agricultural landscape created during centuries by farmers to take the most advantage of the available resources.

Galician *agras* were traditionally composed of open croplands which were surrounded by some kind of fence and subdivided in several parcels through boundary posts. Each of these parcels would bear the same crop all the year round and, after harvesting it, the cattle would be let in the *agra* to take advantage of the crop residues and fertilize de land with their excrements. It was also remarked the importance of gorse to keep the fertility of the *agras*, in such way that the 70% of the forest land of Terra Cha area were covered by gorse and the 22% by trees. The picture of that time would show a territory composed by small forests, shrub land and patches of cropland with a wide variety of flora and fauna associated to these agro forestry landscapes. This image would radically vary in the 60's when farmers started to depend on chemical fertilizers, reducing their capability to produce food using local resources. This trend caused the loss of part of their food sovereignty, since they started to depend on foreign inputs.

Family farms which were oriented to subsistence agriculture and commercializing surplus products in local markets, had to give way to an industrialized agriculture mainly focused on intensive dairy production. The entrance of Spain in the European Union, forced the adaptation of the system, to a higher specialization in dairy production and the disappearance of small farms. Smallholding hampered the increase of arable land of small farms and, therefore, to have land enough to produce their own forage for an increasing number of cattle heads, and thus farmers were more dependent on forage produced outside the region, the same thing happened with fertilizers. All these changes brought a new photograph of the territory. It is at this point where it is explained to the students the importance of keeping local resources production as one of the ways to increase farmers income and reduce their dependence from foreign markets. To this end, it is proposed that traditional practices become more profitable. It is thus proposed the promotion of local food systems in the biosphere reserve to contribute to preserve the landscape and its associated natural values.



WHAT EVOLUTION HAS THE TERRITORY EXPERIENCED IN THE LAST YEARS?

The study proposal was focused in two parishes of the municipality of Outeiro de Rei: Cela and Taboi, which the students had the opportunity to know in situ. These are two parishes which are in the fringe of Terra Cha and keep an important agriculture activity. Cela is more affected by ageing population and slightly keeps some crops aimed at producing food for self consumption. In Taboi, several big farms still persist which keep an important farming activity.

The landscape is covered by pine and eucalyptus stands which are managed intensively. It is also remarkable that the land is being sold to build houses which later become second residences or housing for people that work in Lugo city or in nearby areas. By the time of selecting the spot, it was also decisive that part of the study area is included in a Site of Community Importance (SIC) of Natura 2000 Network; the SIC Ladra Parga, Támoga which is formed by the basins of these 3 rivers, their associated wetlands and a track of the river Miño.

The study area offered an example on how territorial dynamics affected natural and landscape resources, since in this area it can be observed the dynamics of the ageing population, industrialization of agriculture, land use change dynamics fostered by the vicinity of urban areas, and furthermore, the area had natural values recognized by the SIC.

THE STUDENT GROUPS VISIT CELA AND TABOI

The bicycle trip from the town of Rábade to Cela and Taboi was the best opportunity to test the temperature and be able to get in contact with the most characteristic elements of territorial planning in Galicia and, in more detail, of the contrast that is established between urban and rural environments. Nevertheless, what it was really significant of this visit was the possibility which was opened for the students to interchange impressions and opinions with the neighbours of the study area.

The students of the Master in Sustainable Land Planning were the responsible of performing as translators between the Dutch students and the inhabitants of Cela and Taboi who kindly answered a lot of questions of their way of life and customs. In some of the pictures that the students group took, the neighbours of the area can be observed having a conversation with the students and a concrete brick wall in between; a typical structure of Galician rural areas to delimitate property. Later, that very same image was used by one of the working groups to refer to the problems that threaten the territory.

During the visit, the group showed its interest to know the kind of persons who still live in the area, mainly old people who practice small scale agriculture. They also knew about the existence of sanitary problems in the river, about which neighbours expressed their complaints and interest to improve a situation which most people consider to be hopeless.

Each of the students took note of the problems that the inhabitants of Cela and Taboi described, to which they added the curiosities that they had observed in the area. Dutch students were specially curious about the lack of awareness of population on the high flow of the Miño river which they considered to be excessive. They could talk more about this issue during lunch. Students also detected two main

problems which have been threatening Galician rural areas in the last year: the ageing population and its dispersion. All these observations were taken into account by the time of making the plans for the future of the area, but for that matter it is necessary to keep on advancing.



THE STUDENTS SUBMERGE INTO THE THEORY OF THE STUDY AREA.

After having lunch, the three groups went together with the teachers to the Institute for Agricultural Biodiversity and Rural Development (IBADER) where they decided to put together all the information and data gathered so far to discuss it. The students had to discuss and produce a sentence that could condense the problems of the study area. Once the sentence was made, they elaborated a mind map to analyze the problems and finally, taking this mind map as a basis, they made a brain storm session.

In addition, the groups attended 3 presentations on the landscape and the changes that it experimented the last years. In the first place, Eduardo Corbelle, researcher of the *Land Laboratory* and teacher of the Master in Sustainable Land Planning, was the responsible for the presentation *“Evolution of the landscape in the study area”*. Eduardo talked about the processes that took place during the last 50 years in the study area which fostered the land use changes that can be observed in Galician rural areas nowadays and were the result of the dynamics that had already been explained.

To gain a deeper understanding, a member of the *Galician Association of Land Stewardship*, Óscar Rivas, offered a vision on the consequences of landscape changes for natural values and presented different experiences on how to preserve natural values promoting sustainable agricultural practices through agriculture stewardship agreements. At last, Marta, responsible for the program *“from here, fair and organic”* of the NGO *Cova da Terra*, which is aimed at training young unemployed people that want to start their own farm, showed the students the social importance of local food systems. Her presentation was on the possibilities of creating employment in the agriculture sector based on the work that her organization is developing and on the results that were obtained so far.

ARQUEIXAL, FACE THE FUTURE TAKING INTO ACCOUNT THE PAST



On Thursday 6th of March, the group made a half an hour trip from Lugo to the municipality of Palas de Rei to visit a restored traditional farm. Going to Arqueixal in the hamlet of Santiago de Albá, entails a time travel. The owner, José Luís Carrera Valín, accompanied the students up to the “parladoiro” (a restored barn which is now a conference room) where he invited them to completely submerge in a

Ulloa area through a brief documentary entitled “The secret of the cheese”.

We go back to the Galicia of the 60's. A woman with a chequered apron, glasses and a foulard covering her head, milks a cow at the stable, in the same room where the family lives and the rest of the cattle. Chickens go up and down in the wooden chicken coop which is hanging from the exterior wall of the house. Andrés García, researcher of the Land Laboratory and coordinator of the workshop, translates to the audience the words in Galician of Evanxelina Valín *“My husband used to say; my wife was very clean, she would make cheese with a hand on her bottom and the other on the cheese”*. She was talking about the bottom of the bowl where the milk is poured before making the cheese. As de film in which the cheese making process is recreated advances, the students raise questions on several issues, among which, the origin of the cow breeds in the farm, the amount of milk needed to make a cheese (around eight litres) and the reason why the cheese was covered with salt. The lack of refrigeration in ancient times made necessary to use salt both for preserving the cheese and salting it.

Carrera Valín, explained that Arqueixal (the Art of the Albá cheese) was born in 1989 being faithful to tradition and innovating, but not leaving back the past. The pillars where the activity of the farm is founded are related to milk production, milk transformation, active eco-agro-tourism and knowledge culture based on tradition. The dairy farm keeps 30 cows of the parda breed and manages 30 ha of land, among which only seven are owned by the farm, the rest is rented from the neighbours. Carreira Valín defends the continuity of a positive smallholding (in opposition to the current trend of seeing smallholding as one of the main problems of Galician agriculture), like the one observed by the groups in the agras of Cela and Taboi, because by taking advantage of smallholding, the traditional landscape is preserved but taking care and working the land. “Land consolidation would destroy traditional landscape”, Arqueixal owner sums up.

Xosé Luís appreciates that the parcels are already divided with hedges and stonewalls, which allows to rotate the cattle among them. This way, traditional elements are preserved which in turn contribute to maintain biodiversity and thus, to protect crops (the more predators, the better pests are controlled). The owner mentioned that he could obtain more land, renting parcels and arriving to agreements with his neighbours, therefore, smallholding is not a problem to him since he solved the negative part of it looking for other ways to obtain land.

Arqueixal production reaches 500 litres a day which are used to produce creamy cheese, milk bottled in glass bottles and yoghurt. All the production process is made in the traditional way, *“The only thing that changes is the wooden mould which is substituted by a more modern one, the rest is preserved as it was in the past”*, he points out. The commercialization process also tries to preserve the original one. The farm follows a spiral model: the more direct and local that is possible, trying to keep a maximum of a single intermediary between the producer and the consumer. Furthermore, the farm follows the philosophy of the consumers groups selling directly to consumer cooperatives and associations.

In addition to adding value to the



food produced in rural areas, in Arqueixal there is a strong commitment with the addition of value to heritage. So much that they have reconstructed part of a traditional hamlet considering sustainability criteria and using materials of the area, local resources and renewable energies. The space that surrounds the farm became scenery where a humble dwelling of the XIX century in inland Galicia is recreated. Carreira Valín presents this reconstruction as a living ecomuseum. The hamlet is available for the tourists, who Carreira Valín invites to get as much involved in the activity of the farm as they want. There are tourists that help to milk the cows and there are even examples of visitors who feel like going to gather grass in the meadows. Carreira Valín recognizes that

“with all this work we keep a unique agricultural landscape which can't be found in the rest of the region nowadays”

The social work of Arqueixal does not end here; the farm organizes an annual event called “Son d’aldea” (a pun in Galician which means both sound of the hamlet and I am from the hamlet) where all the parish (the ensemble of settlements in Galician rural areas that share the same church) is involved in a theatrical activity to recover the old

traditions. The hamlet is full of life and young people who perform how the hamlet was during the 40's and 50's when rural areas were full of inhabitants. This event remarks the need to recover the self-esteem of being from a hamlet through the recreation of traditional works and agricultural activities such as the reaping and other ones such as bread baking or hand washing the clothes. With all these activities, it has been achieved that Albá stopped to lose population in the last years.

The visit of the students to Albá ended with a walk through the facilities of the farm and visit to the cows. From Albá, the bus departed to the castle of Pambre which is being restored. There, the group had lunch before going back to Lugo. The students could see how the owner of Arqueixal managed to give an added value to traditional products by considering the principles of local food systems. Thanks to this way of conceiving his activity, José Luís Carreira Valín can keep a farming business which respects the environment valuing cultural and landscape aspects.



WORK ON THE SOLUTIONS FOR THE TERRITORY



The students worked taking into account the sentence which they consider to condense all the problems which they detected in the study area:

The lack of coherence and identity of land value among people leads to a decrease of ecologic, structural and cultural values.

They made a review of Galician territorial handicaps among which the evolution from the subsistence agriculture to industrial agriculture could be found. The reasons why Cela and Taboi were chosen

as the study area were remembered again. These reasons are related to both natural and landscape values that both areas gather, where part of the changes in these values that the whole region experienced can be observed.

The work groups elaborated a conceptual map to structure the observed problems and finally made a brainstorm session, where the students were asked to imagine they were superheroes with the required superpowers to solve the problems.

The third day, the students were asked to make drawings on a big board to depict solutions to the problems of the area. This exercise was made to foster their creativity and to provide innovative solutions. The final drawing showed different alternatives, such as buildings where vegetables were grown and pigs bred that could clear space for nature conservation, as well as community farms or underground dwellings to take the most advantage of the available surface. Someone proposed to create wood and food forests and to take advantage of land through tourism too. This was the first approach to change current trends in a land with an uncertain future.

Next, the students continued producing a plan for Cela and Taboi considering how these two parishes would look like within 20 years taking into account the ideas which were generated in the previous exercise.

From this moment on, the groups advanced in the solutions they would have to provide in a public presentation which was scheduled for Friday at 19:00 h. In the Interpretation Centre of the Biosphere Reserve, next to the Rato River.

THE VISION OF THE STUDENTS ON THE PROBLEMS OF THE STUDY AREA

Anouk Steinvorte is a student of landscape architecture and management of public spaces in the Netherlands. Her perception of the study area is related with a place where only very old people live, where the territory is very fragmented and where there is a growing concern on the pollution of the river Miño which waters the landscape. She could deduce from the conversations she had with the neighbours of Cela and Taboi that they blame the slurry produced by intensive cattle breeding for the excess of nutrients in the river.

The analysis that Anouk makes has to do with a concept that many students evoke in their proposals for the study area which is awareness. They believe that it is necessary that the inhabitants of a territory are able to know its relevance and natural values so as to be able to preserve them and respect nature; the same conclusion to which José Luís Carrera arrived in his farm of Arqueixal. Anouk puts as an example the cigarette butts that everybody can throw on the floor. She sums this up saying that it is the awareness on the damage they can produce which forces people not to throw them through the windows of their cars or on a forest, because they can provoke a wild fire.

The solutions to the study area that the group of Anouk worked on, give in addition importance to the adoption of new technologies in rural areas so as to promote their possibilities.

Asier Bea is one of the Galician students of the Master in Sustainable Land Planning. He studied Forest Engineering. As well as his colleagues he depicts an x-ray vision of the study area defined by land abandonment, depopulation and loss of young people who look for job opportunities that they do not find in rural areas elsewhere. With an exception; Asier is Galician and has been living with this image of Galicia since he was a child. He knows that the number of people who do not

find an answer to their future in rural areas is higher and higher and that the lack of job opportunities forces them to leave the country.

Asier enumerates a list of shortcomings similar to those pointed out by his colleagues. He mentions the importance of changing the land use, the ageing of the population, property fragmentation or the depletion of a productive system that is not able to attract people to rural areas.



O The student specially appreciates the working methodology that is being implemented in the workshop and he recognizes how “advanced” and “dynamic” the Dutch students are in comparison with the others. He remarks the quality of the ideas on land planning and their relevance, as well as the training that the students of the University of Applied Sciences of Van Hall Laresstein have in this subject. Asier observes that in the Netherlands, some land planning concepts are more grounded than in Galicia where they are still seen as innovative.

As the students developed their presentations, the teachers also made an effort to match the knowledge on the territory with reality. Irene Visser pointed out that “ what we’ve seen in Cela and Taboi is not the only facet of Galicia”. She invited students to bear in mind the links between rural areas and the city, a relationship which they could appreciate in the bicycle excursion between Rábade and Outeiro de Rei.

Irene Visser is environmental engineer and landscape architect and she is part of the teacher team which comes with the Dutch group. She gives an important role to energies and also to the presence of water as a the backbone elements of the territory.

Natalia Pacurucu is an architect from Ecuador, and shares the working table with two Dutch colleagues. She appreciates that the seminar is able “in so few days” to make a diagnosis of the patient -the territory- and find the treatment - the solutions-. She introduces a new term on which other members of other groups had already reflected: The role of politicians in the conflict. Natalia goes a bit further and provides the following reflection: “it is a responsibility of both citizens and politicians, but if these last ones are not committed, the problem can’t be solved”.

She shares the same opinion with the students from the Campus of Lugo when she remarks that land planning is more important in the Netherlands than in the other countries where the rest of the students come from, among which it can be found Spain.

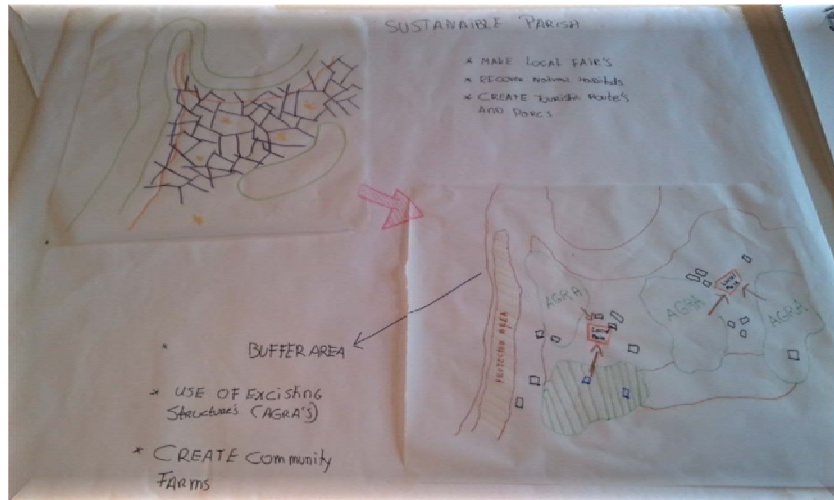
Martyn File studies landscape architecture in the Netherlands. His first surprise related to the territory in Galicia was the great difference with other areas of Spain such as Andalucia. “I thought that Galicia would be similar but there are more trees here and it rains more”, he mentions. He designed a proposal for the study area which can be implemented little by little because “if it is done quickly maybe the changes are not assimilated”.

As well as one of his colleagues said, Martijn introduces tourism as a key to recover the area. Through the promotion of tourism, employment could be created so as to make people come back or stay in the rural areas without the need to go back to the urban realm. To make this more evident he uses a metaphor: “the study area has to appeal like a magnet”. The student considers that this is possible taking into account the values of the study area which can become a fantastic way to promote Cela and Taboi.

The groups are aware on the fact that the territory should be attractive, that is why Martijn suggests new agricultural models where rural lodgements and farms can coexist. As well as his colleague Anouk, he is also inclined to adopt new technologies to invigorate and promote the area and its assets and richness.

All the students agree that the methodology used to develop the workshop was good and assess it very positively, and give a special importance to the results obtained in the brainstorm sessions, valuable information which they could use as an inspiration to generate new ideas to work with. The Dutch students thank the possibility that the workshop offered to them to increase their experiences with people from other countries and be able to get in contact with Galician culture and customs, even in spite of the little time they spent in the region.

ENLIGHTENING THE SOLUTION



All the students and teachers went back to the Rato river side where each group presented their proposals on how the study area should look within 20 years. The responsible for environment and renewable energies of the Provincial Council, Sonsoles López, attended the venue and showed a very participative attitude. She congratulated the groups for achieving such an accurate approach to the territory in only 3 days. Lugo Provincial Council contributed to develop the workshop, a help which was thanked by the students and teachers.

REFORMULACIÓN DE THE AGRA

The *first* proposal was presented by a student of the Galician master and two Dutch students, through a poster composed by several images. They focused their offer in the importance to keep young people in the area through the promotion and recovery of the agras. To this end, community farms would be created where agras land would be managed in common. Young people would live in these farms who would obtain their living working the land under the concept of organic agriculture.

The method that would be used to farm the agras would consist on changing its original internal structure and the orientation of its production, which would also suffer variations compared to the past. The structure of the parcels of the agras would be changed, making rectangular plots, bigger and more uniform, where new products which are not easily available in supermarkets nowadays would be grown. Each of the rectangles would have its own crop. The products would be commercialized to citizens who live closer to the area where the activity is developed through local markets. Another innovation would be the design of trails that would cross the agras and divide de plots where fruit trees would be planted on the edges. The empty areas between the agras would be used to breed animals and use the manure that they would produce to fertilize the agras.

The second pillar on which the proposal would be founded is related to tourism and the capacity to attract people who are interested to know and visit rural areas, creating a place where to camp and try typical products.

DOMINO EFFECT

The *second* of the groups, which was larger than the previous one, based their territorial model on the heritage and the landscape. The starting handle of this model would work as a "*domino effect*". The first piece to push the others would be the tourism, the starting engine of the activity. At this point the students propose the promotion and revaluation of the assets of the study area through the design of a modern smart phone app through which the tourists could find routes or interest points to visit.

The app would allow the user to make a review of the past and recent history of Cela and Taboi, which would entail an appeal for visitors to go to the area. That would be the starting point of all the following activities related to leisure and specialized tourism, the enterprises specialized in offering more complete services, hotels or guides who will accompany the visitors in the routes through both parishes. The idea would evoke an open air museum that the students discovered during their visit to Arqueixal.

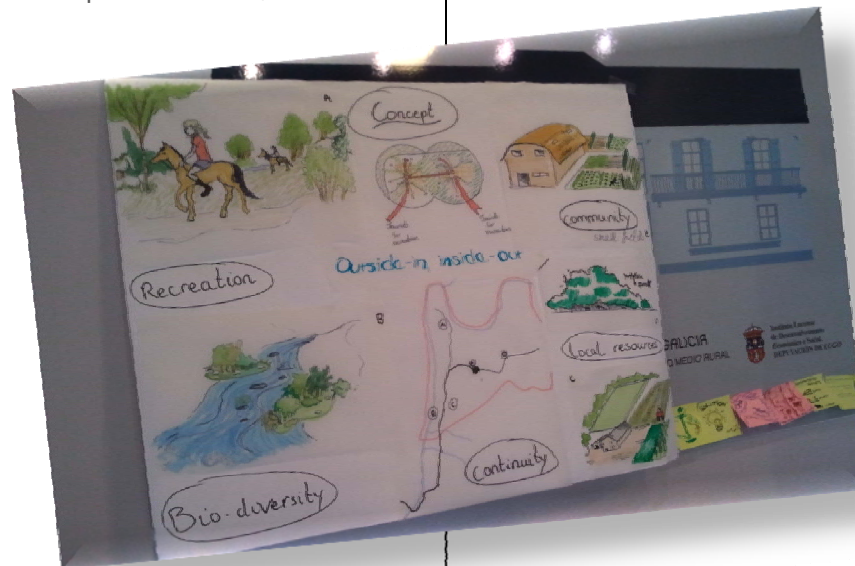
The presence of young people would bring, according to the explanation of the group member, a generational interchange, as well as the blossoming of new ideas. The need to solve new services in an area which nowadays is decaying would also be useful to give continuity to the domino effect in agriculture, housing construction or in the good preservation of the territory and its natural elements.

COOPERATION INSIDE-OUT

The *third* and last of the proposals was shown through a complete presentation entitled: *outside-in, inside-out*. The solutions in this case would swivel several concepts: community, local resources, continuity, biodiversity and leisure assets. The natural values of the study area would be preserved by incorporating ecological corridors and crops would be produced inside the agras to sell in nearby cities.

The tourism would also be present in this option for the future with different offers such as horse rides, trekking or visits to the mystical forest which would be located between Cela and Taboi. The students of the third group recognised that the inhabitants of the study area feel unable to change anything in spite of being very attached to the land where they live and concerned about the problems that they detect. The new scenario would also be oriented to reintegrate population by training. Not only the population which already lives in the area but also young people which may bring new fluxes and activities to rural areas.

The proposal would also incorporate the concept of cooperation in land management through the common administration of forests and agriculture and the cooperation with consumption groups to whom the production could be sold. The students of this group proposed a local and social government model where everybody would participate in decision making and would create a small scale public



service network with open air schools where to teach traditional activities and the sustainable way of managing the territory. The plan would also include intensive agriculture, tree plantation or bee farms which could provide profitable business. The most innovative concept that the group considered is the vertical crops using vertical growing vegetable species which allow saving space.

See you in 20 years!

The students and teachers closed the workshop with the belief that other future is possible for the study area. They also were confident about not having to wait 20 years before the population would go back to the countryside. They hope that their proposals or a combination of them, will really foster the domino effect of the recovery of the study area under the premise of natural values and landscape preservation founded in local food systems.