

ecoLAB or the Art of Domesticating Territories

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ecoLAB at LABoral Centro de Arte y Creación Industrial, in Gijón (Asturias) is an experimentation laboratory at the intersection between ecology, art and open electronics.

ecoLAB is a project that generates subjectivities and dynamics in relation to the biosphere and its ecosystems, through the implementation of eco-technologies (high-tech and low-tech). It operates as a node of knowledge that generates education, research and production areas focused on the ecological, social and technological challenges that today's society is faced with.

The ecoLAB adventure began two years ago when Asturian collectives Libélula Huerta and [Huerta Guerrilla](#) devised a series of citizen participation activities linked to agriculture and sustainability for Patio Sur (the southern courtyard) at LABoral. In February this year, these events began to be organised on a regular basis, coordinated by the curator Pedro Soler. Ideas and projects by the participants began to emerge and take shape, with Patio Sur as the hub for meeting and experimentation. From this slow gestation, ecoLAB has found its place in a local, national and international context of groups and individuals who work along similar lines, sharing information, methods and techniques, and bringing together volunteers from Asturias, Euskadi, Galicia, Italy, Catalonia and Portugal.

In Asturias, as in many other parts of the Atlantic area, there was originally a very close connection between urban and rural zones. The last 150 years of industrialisation entailed a difficult transition from post-industrial and agrarian society to metropolitan, computerised society.

Against this background, ecoLAB is a point of visualisation and interaction between different regional initiatives that carry out research in the fields of natural resources, territorial development and agro ecology. It has become a channel for the exchange of information, resources and methodologies among specialists in the fields of art and the environment. It has already set up collaborations with the Atlantic Botanic Gardens of Gijón and the Instituto de Ordenación del Territorio (INDUROT – the Asturian Territorial Planning Institute).

The ecoLAB's teamwork methodologies are based on horizontality, transparency and the value of process. Inspired by hacklabs and self-organisation practices, ecoLAB follows a free and participatory model. The central decision-making organ is the assembly, which supervises the different projects and work groups that flourish in the space. The implementation of open processes means that there is no central planning. Instead, the project develops in line with its own characteristics and the needs of users. The teamwork is structured in the form of monthly meetings in which participants work on the preparation of the soil for planting, exploration of monitoring systems, and planning of other projects that emerge from the meetings. LABoral Centro de Arte y Creación Industrial supports the working groups by providing materials, accommodation and living expenses for participants during these meetings.

LABoral's production, research and resources centre [Plataforma Cero](#) supports ecoLAB projects through the fabLAB digital fabrication workshop and LABees, experimental electronica and free software laboratory, allowing for instant production of prototypes and designs. ecoLAB participants also seek additional sources of funding and sponsors through other means, using the team for feedback and support in submitting the projects.

Patio Sur: Narratives of a Non-Garden

Patio Sur at LABoral is an entropic space, one of those unnoticed places in which nature acts unchecked, which we tend to think of as inert spaces even though they form part of our daily lives. Nevertheless, it has a biotope consisting of brambles, climbing plants, snails and insects that move imperceptibly. The beauty and casual richness of a non-garden is concealed beneath an apparent formal disorder. With the aim of visibilising the stories and secrets that this entropic space hides, ecoLAB has launched a project to monitor Patio Sur through a biodiversity inventory and the deployment of networked temperature, light and humidity sensors. The resulting map of the space will create a conceptual interpretation of Patio Sur in its natural, cultural and spatial aspects, and generate data that, when translated, will offer us the narratives of this non-garden: a spatial reading of the entropy that is analogous to the loss of data in information transmission systems. This first stage of the project will inform the use of the space in accordance with its nature, as well as generating data that will be used in visual arts and musical applications. This process will culminate in an electroacoustic concert during [Gijón's summerLAB](#), with instruments created using elements from the Patio, data transmutations generated by the sensors (sponsored by [libelium](#)) and other monitoring/energy mechanisms in the garden.

The project and design criteria of ecoLAB projects are based on low-cost, easy installation principles and, as far as possible, on the reuse and recycling of pre-existing materials and the goal of autonomy in terms of energy usage. The aim of the design process is the optimum integration of the environmental, economic and social needs of the system, in such a way that it can be self-regulating and/or maintain a dynamic balance through minimum interferences in the long term. To this end, the team has started to regenerate the Patio Sur biotope, through minimal interventions in the arable space based on the premises of Permaculture.

Permaculture is the conscious design and maintenance of agriculturally productive systems which have the diversity, stability and resilience of natural ecosystems. (...) Permaculture design is a system of assembling conceptual, material and strategic components in a pattern which functions to benefit life in all its forms. [1]

So far, functional experiments have been implemented in the use of eco-technologies (low - high tech) for the development of low cost urban agriculture models. Some of the elements set up in Patio Sur with the help of Javier Palacios, from [Cova dos Ratos](#) de Vigo, are cultivation terraces, a system of rainwater collection, and a simple composting system. Meanwhile, Hernani Días from [Re-farm the City](#) is planning an electronic irrigation system called "on mini vacations" [2].

From the point of view of architecture, ecoLAB is working on a series of spatial interventions aimed at generating physical structures that can contribute to mitigating negative effects on the environment. This project involves an information point and field of

experimentation for sustainable infrastructures that can contribute to the production of knowledge for managing the environment in which we live. Along these lines, the collective Zoohaus continues its [Inteligencias Colectivas](#) project, and in the framework of ecoLAB it has embarked on field work that explores and documents local and ancestral knowledge such as construction, architectural and urban design processes that combine traditional techniques with contemporary needs, incorporating re-used and semi-industrialised materials and construction methods. This research and documentation process generates local creative networks that involve artisans, working collectives and specialised professionals, and contributes to the conservation and development of the cultural and natural heritage of the region. As a practical application, ecoLAB plans to create prototypes based on this research in Patio Sur through a process of innovative collaborative design with minimal material and energy consumption.

To present the project publicly and offer the community and visitors an urban refuge in which to take part in activities linked to nature and technology, an open day was held in March this year. Children and families participated in a collective sowing of varieties of local vegetables, and in games and prototypes created by Susanna Tesconi (Italy/BCN) in the fabLAB, which showed the connection between natural elements and open source technological solutions and the interaction between biological and electronic spheres. In addition, this June, in collaboration with the LABoral public program, International Environment Day was celebrated in Patio Sur, and a solar oven was built with the participation of high school students.

In its educational functions, ecoLAB recovers the social nature of knowledge in the sense of something that is constructed collaboratively and generated through artistic action, from DIY (Do It Yourself) to DIT (Do It Together). The idea is to overcome the digital and technological divide and to reestablish and redefine the relationship between participants and their environment. For the time being, two seminars for teachers have been imparted within Laboral's "art, science, technology and society in education" program. On one hand, Susana Tesconi's FreeKids project introduces teachers-participants to new working tools based on the fabrication of electronic prototypes and the possibilities offered by the use of "arduinos". On the other, the seminar "Pedagogies of Everyday Space" focuses on the educational potential of everyday landscapes and online platforms and offers local schools the opportunity to plan activities in Patio Sur using its resources.

As the culmination of a year of work, ecoLAB is preparing an exhibition in which their work in progress will be displayed at the LABoral's Almacén Sur in September 2011. Among other things, it will include a room for the observation and visualisation of the sensors and other monitoring systems.

ecoLAB?

... is a natural and social system, in which human, vegetable, animal, mineral and liquid elements coexist. A project that applies the methodology of Permaculture used in farming to the sphere of social organisation. This methodology is similar to natural processes and to the primordial relationship that connects the human context with its surroundings. Based on this applied observation of space and on bioregionalism [3], ecoLAB has become transversally embedded in a contemporary arts institution through the appropriation of a residual space. On several levels of activity, it combines the intelligence of cutting-edge technologies with those of traditional forms of knowledge, sets up processes in search of autonomy in resource and environmental management, and generates other narratives of the environment in which we live. ecoLAB is anchored in three ecological registers – the environment, social relations, human subjectivity –, and a system where "the interactions between ecosystems, the mechanosphere and the social and individual Universes of reference run transversally". In its actions in time, ecoLAB reinvents the concept of the "andecha", a kind of traditional rotating communal work in Asturian villages, in which everybody works for everybody according to crop cycles and the decisions of the assembly[5].

[1] Definition of Permacultura on the wall of the eco-house at the Rhuba Phoil Permaculture Centre (Isle of Skye, Scotland).

[2] A wiki and a working forum have been started in order to document the processes:

http://ecolab.plataformacero.cc/wiki/index.php/P%C3%A1gina_Principal

<http://ecolab.plataformacero.cc/foro/>

The documentation of the events and activities can be followed on the Laboral Centro de Arte web site:

<http://www.laboralcentrodearte.org/es/plataformacero/ecolab>

[3] Biorregionalism is a system of political administration that seeks forms of development that prioritise and adapt to local communities with specific interests in sustainability and durability. It is a term linked to "social ecology", "a reconstructive, ecological, communal and ethic approach to society" and broadly related to the work of Murray Bookchin. Source: Institute for Social Ecology:

<http://www.social-ecology.org/>

[4] Félix Guattari, *The Three Ecologies*, London, The Athlon Press, 2000, p. 43

[5] The Asturian term "andecha" consists of individual, voluntary, free work carried out in line with the agricultural cycle and tasks such as the construction or repair of a building in villages. Definition of "andecha" by Xulio Concepción Suárez: <http://www.xuliocs.com/>.

[6] Lead photo: digital fabrication processes, Susanna Tesconi.

[7] The title is based on a phrase by Felix Guattari, *The Three Ecologies*, London, The Athlon Press, 2000, p. 53

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