

LASOS as a shared Project for promoting agroecological networks in Tenerife (Canary Islands)^a

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Abstract

The LASOS (Laboratorio Agroecológico de Sostenibilidad - 2014-15) Project has endeavoured to contribute towards improvement in the agro-food system of Tenerife with a twofold focus: development of agro-ecology and consolidation of sector-related networks. There have been many and diverse actions and collaborative links created between the different areas of production, research, technological innovation, as well as cultural and social experimentation. This has helped to make visible the complex reality resulting from agro-ecological initiatives in Tenerife, favouring mutual acknowledgement and creating greater awareness of existing potential and resilient responsiveness, and prompting the creation of a framework of conditions which foster multiple synergies.

The expectations created require focus on continuity, but the subsequent process should also be governed by criteria of co-responsibility, co-management, etc. Transversal extension should be one of the ongoing objectives of this project.

Introduction

LASOS is acronym for “*Laboratorio Agroecológico de Sostenibilidad*. Pilot Project for the integration of economic, environmental and social spheres in a more self-sufficient island”. This project was approved by the Island Government of Tenerife (*Cabildo*) in the context of the “*Tenerife Tres-i*” internal call for projects. It was developed between April 2014 and June 2015.

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The promoter of the project was the Environment, Territorial Sustainability and Resources Department of the Cabildo of Tenerife. It counted with the participation of other Departments of the Cabildo [Agriculture, Livestock and Fishing; Institute for Social Affairs and Welfare (IASS); Tourism of Tenerife; Independent Museum Board] and several external institutions: University of La Laguna (ULL); Canary Institute for Food and Agriculture Quality (ICCA) of the Canary Islands Government; Turisfera Cluster; RICAM Cluster; Association for the Development of Permaculture - Finca El Mato (ADP-FEM)].

The general objectives of the project were:

1. To foster agroecology as a resource for the island's farming land, and its repercussion on sustainability, social inclusion, quality tourism, social welfare, health and education, economy and food sovereignty.
2. To promote, boost and develop collaborative networks between public and private bodies and civil society, in order to enhance and further endogenous resources with an innovative focus.

During the course of this project, Finca el Mato (www.permaculturatenerife.org/), headquarters of ADP-FEM, has been taken as inspiration as it is a standard-setting experience, with a clear focus on development in the field of recovery and design of agroecological and sustainable social activities, and declared of public utility. The artisan know-how of Finca El Mato during twenty years of trial and error highlights the farm's standing as a place for production and experimentation; a place for encounter and the construction of learning communities and open knowledge (working with whatever is open, collaborative and practice-based); a crossroads for people with different profiles, know-how and interests; a source of inspiration for different fields, over and above its "sector"; rooted in the local context, it provides specific solutions for the complexity of the present; it accomplishes multiple functions.

LASOS has had the aim of engaging all societal actors in the co-construction of innovative solutions, strategies, products and services related with agroecology development in a context of Responsible Research and Innovation (RRI)^b. The success which the project may have reaped is undoubtedly due to the condition of co-constructive project right from the start: on 21st February, 2014, a week before the end of the call for projects, a viewing workshop was held in Finca el Mato with the participation of 36 persons from 14 entities (see Photo 1).

Photo 1.-Map of ADP-FEM as focal point for transversality

^bRRI is a dynamic, iterative process whereby all stakeholders involved in the Research and Innovation practice become mutually responsive and share responsibility regarding both the outcomes and process requirements.



Said workshop defined the basic lines of the project and specified the activities (see Table 1). During the 12 activities which made up the project, more than 400 people from over 130 entities and related initiatives were invited to attend. In the end, 317 people from 113 entities participated directly in the activities.

Table 1: Specific objectives

Specific Objectives	Contents
1: BUSINESS & FINANCE	To promote permaculture and agroecology as an environmental and sustainable business niche, and as example of economies of scope.
2: SOCIAL	To develop a working methodology that is useful for strengthening the ties and collaboration between agroecological farms, public bodies and civil society. To promote healthy diets. To include permaculture in Social Centres of the Cabildo of Tenerife and the use of the farms as a social inclusion resource.
3: ENVIRONMENTAL	To convert FEM in model for cultivated biodiversity and integrated resource management (soil, water, waste, energy, use of local resources, proximity management, landscape integration and environmental improvement).
4: DISSEMINATION & CO-ORDINATION	Creation of a communication tool and a specialised technical team for the dissemination, co-ordination and management of the project.

The general structure of the implemented actions has been the following:

- Acquaintance with the FEM experience and its reference data, with a basic study of productivity in this kind of agriculture and other existing results in financial, environmental and social spheres.
- Viewing workshops on the options in the different lines (or exchanging perspectives).
- Development of subsequent and feasible actions within the context of the project, in collaborative and innovative surroundings.
- Presentation of conclusions and debate.

- Publication of results and design of ensuing projects.

On the importance of working methodologies

Each objective was developed by means of different lines of work, called “activities”, 12 in total, under the responsibility of each participating body. The basic activities and their outcomes are compiled in <http://www.proyectolosas.com/>.

The technical team, aware of the specific objectives and the need to raise awareness in all the parties involved, implemented an *ad hoc* methodology based on techniques that pursue strengthening the participative dimension, which is summarised below:

- Co-construction processes for ideas/reports/studies: a very large number of people with different perspectives were consulted, incorporating their contributions to deliberations, thus allowing more systemic and corroborated results. This also helps validate the lines of work and identify priorities.
- Return of the information/documents to the participants, with a consequent favourable impact on active participation, and ongoing evaluation of impressions, expectations and satisfaction, which reflect a wide range of viewpoints, enhancing the group. In general, valuations exceed expectations.
- Investment in pleasant community conditions: surroundings and timelines which are favourable for the exchange of ideas, a requirement for fostering transversality and the collaboration between people who do not necessarily share knowledge.
- Visit-case analysis of 20 agroecological initiatives, which have demonstrated the broad diversity of strategies on the Island, while allowing the identification of common features and difficulties.

Within the structure of the actions implemented in the project, a core element is the option viewing workshops. These workshops were conducted by means of the “landing” methodology, which consists in starting each activity with a visit to the farm. Participants have a first-hand view of the permaculture processes, which leads to direct insight or *sense* of what it consists in. This allows more systemic thought on the questions posed in workshops or meetings, in order to avoid disciplinary pigeonholing. “Landing” also favours common language among participants, which is always a challenge when people from different backgrounds get to work together. All this has contributed towards favouring communication and collaboration between persons and entities, constructing or consolidating ties and potential networks, and identifying common issues and synergies. R+D+i possibilities are contemplated: interaction between research centres, companies, administration, joint committees, civil society, etc., to conduct small-scale actions, with low cost and high added value; the capacity to take on university internships, vocational training, etc., an example being the dissertations and internships in ADP-FEM.

The links and repercussion of the project show that its impact does not end in fleeting motivation, but has materialised in results.

Results

There has been a contribution towards visualising the complex emerging reality of agroecological initiatives in Tenerife, which favours mutual recognition and creates greater awareness of existing potential and resilient response capacity, prompting a framework of conditions which fosters multiple synergies.

A high degree of project-related relations, contacts and ensuing work has been generated (a total of 65 documents which can be consulted through the project report in which a broad set of working proposals are defined).

<https://drive.google.com/file/d/0B0qFfm69XYWDOEwtMG5KNk1SSmc/view>.

With respect to the subjects of the 7th Living Knowledge Conference, “Enhancing learning and teaching” and “Forming effective collaborations”, there is a need to highlight some proposals which emerged from the LASOS workshops on the educational facet of agroecology (Activity 6), associated to the process of forming effective collaboration involving engaged stakeholders in different aspects of the research and innovation process:

- Creation of a common platform-type space for knowledge and training on the subject, etc.
- The complex projects of ecological farms include educational and training services. Furtherance of these practices, addressing:
 - o The employability and compensation of persons who provide this type of training and guidance services.
 - o The potential of internships, dissertations and theses as an opportunity for research-action. Compilation of a catalogue of job offers and research subjects which could be taken on by university and vocational training students.
- To enhance and further the motivation of organic farmers: their role as land masters, as teaching professionals (in workshops, courses, presentations) where their activity is remunerated. To favour points of encounter which strengthen motivation: the farm as educational resource. To pose agroecology as a value-changing tool and as a powerful instrument for personal development. The importance of highlighting, enforcing and divulging experiences of this type.
- Studies on intergenerational and inter-professional knowledge transfer. To analyse and strengthen generational change management. To boost mutual knowledge of networks, consumption groups, short marketing circuits, time bank...through tools and spaces which foster mutual support of all these initiatives and collectives.

Furthermore, there is a need to stress the potential of permaculture and of agroecology in general, as source of inspiration, which implies – among other things - transversal extension (transmission, co-operative disposition,

volunteer work-learning; optimum educational and training conditions in situ, with direct and comprehensive experience-based learning); wellbeing, harmony, health potential deriving from a good diet and positive and proactive contact with nature, perceptible advantages for psychological welfare, inclusion, a sense of usefulness, of participation and commitment, improvement in self esteem, inner peace, relaxation...

Lastly, it also provides an awareness of focus on the commons, jointly investing in an increase in the degree of food sovereignty; on the wealth of shared and accessible knowledge of resources and management capacity adapted to the specific environmental conditions of each island sector; on collaborative culture and mutual trust; ultimately, investing in awareness and practice of eco-dependence and interdependence.

A set of 91 proposals and perspectives emerged from each of the lines of action (project report, pages 48 to 58) <https://drive.google.com/file/d/0B0qFfm69XYWDOEwtMG5KNk1SSmc/view>.

Evidently, the migration from proposals to materialisation is something that goes beyond the scope of the project. For the time being, LASOS has contributed towards the creation of a space for inter-sector encounter and broadening of perspectives, but there is a need to see to what degree this can translate into sustained commitments on the part of the participating entities, or can be developed by means of *underpinning*, through more specific projects with resultsthat can become more tangible in a new phase ensuing the innovation project. A space for possibilities is not a strategic focus in itself, even though it constitutes a good diagnosis with broad participation. So what are the next steps? The writers have identified some lines of action for the strategic approach based on project results. One of them consists in delving into the potential of the relationship between agroecology and sectors which have not been sufficiently studied in LASOS: biodiversity, waste/resources, health, as well as in others which have been studied (social inclusion, tourism, education, etc.).

Interdisciplinary Courses and “Agroecology and Academy”Participative Research Seminar of ULL

These two activities, which are both parallel and akin to LASOS, are contributing towards furtherance in the relationship between agroecology and education through “Enhancing learning and teaching” and “Forming effective collaborations” issues.

The LASOS project has played a role in favouring teaching activities, including ULL Interdisciplinary Courses (CIULL),which have provided feedback; namely, the 2014 and 2015 editions, whose sessions were mainly conducted in Finca El Mato, and were closely associated to the development of the LASOS project activities:

- “Transition and research initiatives to and with the community” - CIULL 2014
- “Cultivating land, food and health” - CIULL 2015

The director of these courses, a ULL professor, ADP-FEM collaborator and member of the LASOS team, has been using this RRI system since 2007:

- “The creation of proximity in water management. Emulating the principles of Nature” –University Extension Course 2007
- “A walk along the pavements of the historical centre: an opportunity for shared learning ” - University Extension Course2008
- “First observe, then reflect in the wake of perception: creation of proximity in the university-society relationship” - CIULL 2012
- “The establishment of limits: a new cultural awareness” - CIULL 2013

These courses have been considered opportunities to create reciprocal learning contexts and spaces, to promote significant dialogue between different types of knowledge. Based on assessment by lecturers and on a highly heterogeneous group of students in terms of training and age (made up by different ULL degree course students and persons from diverse sectors and spheres of society, with ages going from 20 to 87 years old), there emerged the need to continue investigating into a new project. In this way, the course project has been in permanent construction based on the foundations established in previous courses. We are talking of what De Sousa Santos (2007) poses as the ecologies of knowledge: knowledge that is contextualised, rooted, positioned and useful. Below is an example of the appraisal on the part of students of the methodology in the last four courses which underlines the contribution towards collaborative research with communities:

- “It has been a totally different course with respect to others, with an original methodology and a combination of theory and practice. Therefore, the course was highly comprehensive”. (2012)
- “The idea that knowledge is or can be in all places is fantastic. The University of La Laguna in the Finca. I think this exemplifies the transformation needed in all spheres, including education. Thank you”. (2013)
- “Expectations? More than fulfilled, if that’s possible. Just the fact of having had the opportunity of seeing ‘in situ’ that change is possible, of seeing sustainable alternatives which can include everyone was well worth it”. (2013)
- “I thought the course would be more formal, but I was pleasantly surprised to find a “human” course. Knowledge is acquired which is impossible to place in a file on my shelf, because the knowledge is tools; and when you have tools, all you want to do is to get to work immediately”. (2013)
- “I value especially the University-Finca El Mato tandem. I finished my university studies a long time ago and I would have loved to have had the possibility to leave the classroom and broaden my vision and knowledge”. (2013)
- “I like to feel that I learn through observing and listening but, especially, I think “doing” it is more important, in order to leave knowledge to macerate inside me”. (2013)
- “It helps to focus on details and, at the same time, broaden perspectives. It also favours action based on the principles of observation and reflection”. (2013)
- “I value enormously the combined design and delivery of the course. I think that the way it is done is an element which fosters learning-action”. (2014)

- “My appraisal of the course is highly positive. I would highlight the practical aspect and backup of scientific knowledge both through research and by knowing how to put initiatives into practice”. (2014)
- “The ‘composition’ of the course was constructively full of surprises. Theory combined with practice made possible a deep understanding [...]. ULL in the farm gives life to teaching, the questionnaires and post-its of impressions made me feel a part, and not a mere consumer, of the course right from the start”. (2014)
- “Not only does it seem excellent to me, but I also think that it is an exceptional model for any theoretical-empirical action, in addition to being coherent in terms of form and contents, and in scope (rational-emotional)”. (2014)
- “My appraisal is that this type of courses helps change the paradigm of education, constructing more peer-based, face-to-face ties and enhancing the educational process”. (2014)
- “I appreciate the delivery of more theoretical as well as practical knowledge. Plus, it has contributed towards broadening the perspectives of both my professional and family life project, including agroecological know-how and practice. Thank you and congratulations!” (2014)
- “It is essential for ULL to enter this sphere. I have learnt more about agriculture in a few days than in years of university study”. (2015)
- “My appraisal is positive. There is a reflection and development in society which is prompting the creation of new ways of thinking and acting, and I’m very glad because I missed this change. The course has fulfilled my expectations and has even given me more than I expected”. (2015)

Photo 2.- Some images of the CIULL courses.



From the LASOS project and the aforementioned interdisciplinary courses, some shortcomings were detected when it came to visualising the development of agroecology in the fields of education and research. And this despite the forceful international evidence of backing for agroecology (IAASTD 2008, de Schutter 2010, UNCTAD 2013, Rodale Institute 2013, Robin 2013), and the wealth of agroecological experiences in Tenerife identified during the course of the project. IAASTD (2009) throws some light when it comes to the weakness found in the relationship between agroecology and politics. Namely: “Many of the challenges facing agriculture currently and in the future will require more innovative and integrated applications of existing knowledge,

science and technology (formal, traditional and communitybased), as well as new approaches for agricultural and natural resource management”.

Within this context, it is worth asking oneself what is the real role of academia in the promotion of agroecology, for example, in syllabuses and research agendas of universities, research centres, vocational and other training centres. Should the promotion of agroecology be seen as an opportunity for opening new educational lines and formats?

This is the rationale behind the proposal for a participative research seminar on 27th November, 2015, in Finca El Mato. The person responsible for the seminar, also director of the CIULL courses, invited people from different university departments and research centres with whom there has been co-participation in LASOS, in CIULL..., not only to enquire into the interest and potential of agroecology for academia, but also to see agroecology as symptomatic and a possibility, thus requiring academia to adapt to the times.

The invitation required the interested parties to previously answer the following questions:

- 1.-Your professional sphere?
- 2.-Do you identify any relationship between your professional field and agroecology?
- 3.-How would you describe the relationship between your academic or technical field and agroecology?
- 4.- Could you pinpoint some proposals, from your perspective, to improve the relationship between agroecology and academia in regard to syllabus, research agendas, extension courses, internships, dissertations, theses...?

Photo 3.- Some pictures de the “Agroecology and Academy” Participative Research Seminar of ULL



39 people answered. The data from the questionnaire was processed anonymously and was sent to the participants a few days before the seminar. It was also used as material during the seminar through the presentation of four speakers who were asked to provide their impressions on reading the questionnaires with

respect to the objective of the “Clues for reinforcing the Agroecology and Academy tandem” seminar. As an example, below are the notes of one of the speakers, A. de Armas:

- Agroecology, as an **emerging process**, generates interest in students, prompts debate and interdisciplinary projects.
- **The agroecological movement favours a different framework of relationships** which modifies and reinvigorates (or can do so) the relationships between academia, public institutions, the business sector and society.
- This is why agroecology is awkward for traditional academia, which tends to boil it down to “ecological agriculture”.
- **Agroecology recovers fresh impetus** in line with the Free Educational Institution (ILE) and reformist movements in teaching, having a positive influence in fields such as syllabuses, research agendas, projects, extension courses, internships, dissertations, theses...
- **Agroecology as ideology, as model** and as far-reaching programme, emphasising the central importance of food.
- Redefinition and institutionalisation of **another focus on what is profitable (institutional approach)**.
- **Interdisciplinary nature.** Research from disciplinary fields, but with increasing connections with apparently distant and different disciplinary spheres (based on the central importance of food), but relating it to such diverse issues as those already mentioned, for example: social-educational intervention; energy and resource efficiency; carbon sink; cost and price analysis; participation methodologies; knowledge production and social control of technology; soil regeneration; green corridors, and many more.
- Closerlook at the methodology of **interdisciplinary courses** such as those in Finca el Mato. Towards a new trans-disciplinary format in method and contents?
- More specifically, to create and support **platforms** which promote collaboration between agroecological initiatives and academia; for example, **boosting the ULL Permanent Seminar on Ecological Agriculture (SPAE)**.
- The role of the **farms and other initiatives as space for research, practice...** Gradual modification of the distribution of classroom times (theoretical training) and internships.
- To further and apply **participative methodologies** to favour the creation of data exchange nodes and spaces, generators of projects (LASOS has gone in that direction).
- **Eco-university projects**
 - o Space for experimentation, living lab...
 - o Edible gardens
 - o Etc., etc.
- **Cultural professorship on agroecology**, which connects with or extends another professorship on disaster risk reduction and resilient cities.
- **ULL Sustainability Office**, environmental management plan for ULL

- Specific module or seminar on permaculture as tool for social-educational intervention...

After the intervention of the speakers, the person responsible for the Seminar, based on various documents from UNCTAD (2013) “Wake up before it is too late” report, established a thread, that of the “relationship between agricultural biodiversity and nutritional diversity” based on the objective of the seminar, the information generated by the questionnaire and the “landing” in Finca El Mato by its head, Javier Reyes-Barroso.

Once the “landing” was over, the participants were asked to “decant the landing” before the final debate, using the following three questions as guideline:

- From your professional field and based on your experience in the Seminar, what steps would you propose when it comes to strengthening the Agroecology and Academia tandem?
- Based on the experience and the objective of the Seminar, if there was a second part: what professional profiles would you recommend for participation in this second seminar, and what ones were missed today?
- How do you rate the format of the Seminar?

These are some of the impressions deriving from the decantation. Namely, those of the first question:

- “A conceptual foundation must be created to start up the line of work. It must be a two-way foundation:
 - University (and other teaching) outreach towards the agroecological sector (knowledge, technical support, student internships and projects, etc.)
 - Agroecology outreach towards teaching, exporting acquired knowledge and techniques”.
- “Work must be conducted with specific proposals in order to transfer them to decision-making bodies in the field of education, politics, etc.”
- “It is increasingly clear that the time has come for a deep change in which learning is hinged on live and integrated processes, such as the one represented by Finca El Mato, where the benefits in terms of ecological efficiency, biodiversity, health and welfare (of all living beings) are maximised”.
- “To include or extend it to the students (Degree, Master and Doctorate)”.
- “Academia, the university world, requires “landing”, a descent to simple experiences as the one lived today but which makes us aware of the need to establish and intensify that relationship”.
- “Forums, meetings, courses and, please, the need to include Agroecology as subject in the more pertinent and related Degrees”.
- “To open our respective research fields to this new awareness and to think about how we can integrate it in our professions”.
- “The range of possibilities through interdisciplinary research projects, theses and dissertations is incredible”.

Summarising, the objective of the Seminar consisted in putting different actors in contact in order to investigate potential niches for innovation (spheres featuring the possibility of deviating from the rules of the prevailing technological system), which help to erode technological and institutional obstacles with respect to agroecology,

perceived during the LASOS project and the CIULL courses. During the Seminar, local “unblocking” proposals were co-created, among them collaborative research with communities that can enhance students’ learning as well as building their capacity for RRI (research-engaged citizens).

Conclusions

For the time being, LASOS is the result of an innovation project for which collective meditation is advisable, both in its development and its methodological dimensions. The technical team highlights, among many other methodological and management-related reflections on the project, the following:

- The success of the project, especially from the qualitative viewpoint, is probably due in part to its integrative aspect and the space for action-reaction offered to each participant. The “cohesive” effect of the project is highlighted.
- The multidisciplinary nature of the project team has also enhanced the development of the project which is interdisciplinary in itself.
- Many of the techniques implemented could be reused in other awareness projects, given the efficiency shown through the observed impact.

For the future, already present, the expectations created require attention to continuity, so avoid frustration, but the ensuing process must also be guided by criteria of co-responsibility, co-management, etc...

In regard to lines of work, the LASOS project constitutes an exceptional opportunity for investigating and pinpointing important issues for the agroecological sector of the Canaries (with respect to training, techniques, technologies, agronomic singularities,...) which tend to be absent from the priorities of public institutions, on account of their strongly innovative nature and transversal and/or reduced dimensions, as was made especially clear in the “Agroecology and Academia” Seminar.

A guideline for the future was provided in the mycological metaphor pronounced by Idoia Jalón, Responsible for Social Promotion and Development of the BioAlai Group in Vitoria in her paper in the latest CIULL: *“to invest in the hyphae which make up the mycelium, and not so much in the carpophorus; that is, to focus on weaving potentially fruitful relationships rather than on pursuing short-term results”*. This approach favours a space addressing co-management or the implementation of projects other than LASOS; that is, it is a forceful booster of co-construction and co-responsibility. In this regard, LASOS is not a mere institutional project, it is the reflection of a process under construction, and its possible futures are consistent with the changes observed in many other parts of the world, which define new individual and community priorities, new spaces and forms of exchange.

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