AGROECOLOGY INITIATIVES IN EUROPEAN COUNTRIES

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Contributors

Authors

Layout design
Manuela Ferreri, Nicholas Panayi

Icons design
Ilaria Zampieri

Pictures
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Introduction

Tommaso Gaifami, Lukas Hallberg, Martina Re

As agroecology is a holistic concept that covers the ecology of food systems, it includes the environmental, economic and social impacts from food production and its interactions with nature and society [1]. The emergent transdisciplinarity of agroecology, with applications in agronomic practice, science and social movements, comprises different knowledge systems that stress the importance of regarding the concept not only as a natural science [2]. In order to give a complete picture of the current agroecological activity, it is beneficial to map initiatives related to agronomy and ecology as well as research and activism within economic and social domains.

No prior existing holistic overview of agroecology comprising several European countries has to our knowledge been carried out. It is also worth noting that this report includes novel insights to some countries where agroecology have received little or no attention so far (i.e. Albania, Austria, Croatia, Hungary, Serbia and Sweden).

The objective of this study was to map agroecological initiatives in 11 European countries across the pillars of practice, science and social movements. The mapping was approached by gathering information of agricultural practices, science, and social organizations in order to get a general overview of agroecological activity and level of development in each country. In this report a first overview about the current status of agroecology initiatives in Europe is given, also highlighting similarities and differences in the perception and understanding of agroecology among diverse contexts and regions. The examples of best practices and initiatives identified in this study, including determinants and conditions for success, can be used to inform future recommendations towards agroecological transition across all scales of food systems.

Agroecology Europe entrusted the task of carrying out the mapping project to the Agroecology Europe Youth Network (AEEUYN) [3], an open group of young people interested in agroecology as an alternative to actors within the conventional agri-food systems, either from the production, distribution, social empowerment/inclusion, or political point of view. We acknowledged the opportunity to involve the young generation in identifying agroecology initiatives in Europe, based on their contacts, concerns, and contributions. The AEEUYN members’ interest in agroecology is based upon a set of experiences and knowledge of networks, which are not systematically documented and this represents added value to the AEEUYN involvement in this project. The key benefit was to strengthen the connection between Agroecology Europe and young people, to enrich and add value to Agroecology Europe and to the agroecological initiatives itself through the experiences, local contacts and knowledge of young members in each country.

References


Methodology

Congmin Li, Claudia Fernandez Gonzalez, Sara Monti, David Navarro-Miró

Introduction

In this chapter, we outline the methodology used to identify the current state of agroecology and analyze relevant agroecological initiatives in eleven European countries. A brief consideration on methodology's limitations is also provided at the end of the chapter. The activity started on July 2019, at the first Agroecology Europe Youth Network (AEEUYN) workshop, that took place at La Bagaggera Organic Farm in Italy. Twenty AEEUYN members from ten countries, including students, researchers, agroecologists and two young farmers, participated. During the workshop, members discussed important issues about how to proceed with the mapping project, including its objectives, methodology and final outcomes. The workshop allowed the group to set up the first steps of the mapping project in a participatory way, remaining open to everyone's ideas or thoughts, through continuous brainstorming and talks.

Following what was decided together at the workshop, the mapping activity was carried out by some members of the Agroecology Europe Youth Network, most of which participated to the workshop, whereas some others joined the project later. A small group of members was in charge of developing a solid, well-structured methodology, whereas coordinators were chosen to apply the methodology, by researching and writing the final report about a country of their choice. The mapping activity involved a group of eleven countries; every country had between one to three coordinators. The countries included in this study are: Albania, Austria, Belgium, Croatia, France, Hungary, Ireland, Serbia, Spain, Sweden, United Kingdom. The developed methodology to write each country report consists of three parts: 1) Preliminary steps; 2) Analysis of current situation of agroecology in the country; 3) Analysis of country’s initiatives. This chapter will describe in detail all the steps taken in each section of country analysis.

Figure 1. Description of the methodology used for each country report
Preliminary steps

The preliminary steps regard the process of selecting and interviewing key informants, undertaken with the aim to gather valuable data for our research. The entire process of the country analysis, described in Figure 1, is based on the premise that agroecology is a scientific discipline, an agricultural practice, and a political and social movement (Wezel, et al. 2009). Hence, we structured our research keeping three main pillars in mind: “Movement”, “Practice” and “Science”. Movements include NGOs, farmers’ unions, cooperatives, etc; Practice includes farmers, farmers’ markets, Community of Supported Agriculture (CSA), consultants, advisory services, etc.; and Science includes universities and research centres about agroecology.

Selecting and contacting key informants

Three to five key informants per country were selected for each pillar (“Movement”, “Practice” and “Science”). Ideally, key informants were connected or had knowledge on more than one pillar. Key informants were contacted via email or phone.

The informants have been identified from the following sources:

- participants in previous mapping projects on organic farming, permaculture, sustainable food systems, Non-Governmental Organizations (NGO’s) with projects working on agroecology, food sovereignty, Community of Supported Agriculture (CSA);
- participants in national agroecological gatherings, conferences;
- researchers in universities or research centers that contribute to agroecological courses, chair groups or programmes in agroecology;
- people who are part of Agroecology Europe Network.

Interviewing key informants

Subsequently, an exploratory study was performed, and the selected key informants were interviewed. Interviewers could choose to interview key informants face to face, via online meeting, or over the phone due to scheduling or logistical difficulties. These interviews were conducted in order to gain insights into the agroecological context in the country, such as level of agroecological implementation and political priorities, and main socio-economic barriers to agroecology. Another purpose of the interview was to ask about agroecological initiatives in the country.

The interviews with key informants followed a semi-structured format with a few questions to guide interviewers to collect most relevant data. While the interviewer used a list of prompts and questions to guide the conversation, interviewers let each conversation flow naturally in a flexible way, focusing on the elements that seemed the most interesting and relevant to each
In some cases, the interview was recorded for further data analysis, and each interview time ranged from 30 minutes to an hour.

**Analysis of current situation of agroecology in the country**

One the main goals of our study is assessing the current situation of agroecology in eleven selected European countries. In our research, the first section of country analysis regards the assessment of the country’s agroecological situation and it is divided in two parts.

In the first part, coordinators undertook a review of the available literature and performed few interviews with key informants. Coordinators were researching with the following aims:

- get a historical overview of when agroecology started in the country;
- understand the historical and present context under which agroecology was developed;
- discover the possible geographical distinctive areas where agroecology is developed within the country;
- understand the level of awareness of agroecology within the civil society;
- understand the type of legitimacy agroecology has at the political or decision-making level;
- find out the general challenges that promoters of agroecology face.

In the second part, more information is provided around three specific dimensions of the *Movement* and *Practice* pillars: 1) Social movements; 2) Agroecological practices; and 3) Alternative/short-chain markets and local products distribution channels. Although they are also fundamental parts to explain the state of agroecology in a country, we decided to not include specific sections on education and research, and on policy because of the limited resources and the relatively low number of informants we interviewed.

**Analysis of country's initiatives**

After the analysis of the current agroecological situation in the country, some initiatives were selected to be analysed, as described in the following three steps. In general, in our study initiatives include projects, activities that put agroecology into practice (farms, local markets, et simila) (*Practice*); initiatives also include platforms/organizations that have attempted to collect information about what we know about agroecology in general; initiatives are also university programs and courses or training/teaching courses/activities promoted by any organization (*Science*); initiatives are also social movements of people promoting agroecology with any meaning (*Movement*).

**Gathering initiatives**

The interviews with key informants were processed and integrated with the information of
previous mapping projects in the country. As a result, coordinators produced a list of agroecology initiatives gathered per each country, as suggested by OSALA (2014).

Selecting initiatives

From the big list, around two initiatives were selected for each pillar of “Movement”, “Practice” and “Science” (the exact number can vary across countries). These initiatives were chosen by coordinators to be analysed in order to have a deeper understanding of what type of initiatives are occurring in the country. The selection of the initiatives wasn’t only based on the information provided by the key informants or previous mapping projects, but also according to the adaptation of the CERAI’s (2019) criteria:

- the initiatives were more than three years old. Exceptions were made for outstanding initiatives or for “almost three years old” initiatives;
- outstanding initiatives that tackle social and/or environmental and/or economic problems or difficulties in organic agriculture;
- the selection, for the Practice pillar, favor initiatives that are economically and socially viable;
- initiatives that were cited by more than one key informant or previous mapping projects;
- initiatives that represent different parts of the country and national features;
- initiatives that most show a balance between different sectors (i.e. processing, distribution, marketing, production) involved in agroecology.

Analysing initiatives

The selected initiatives per country were then described and analyzed in detail. To do so, coordinators obtained information through interviews with representatives of the initiatives, and complemented with public information available (website, reports, articles, etc.). First, a brief overview contains the contact information and an illustration of the type of actors involved, history, duration, region/s of impact, specific topics, objectives, and type of initiative. Second, a detailed analysis of initiatives for the Practice and Movement pillars follows four dimensions: Environmental, Political, Economic, Social, while the initiatives under the Science pillar are analysed through more descriptive criteria.

For the initiatives under the Practice and Movement, each of the four dimensions were divided into respective categories as shown in Table 2, and inspired by CERAI’s (2019) mapping project (see Appendix 1). The categories were used both as a template for the interviews, and as a way to better analyse the initiatives, unpacking the different areas of action an initiative can have.

In this part, coordinators described a selection of “positive impacts” provided by the initiatives as well as “limitations” that they faced. To gather such information, initiatives’ representatives were asked (during the interview with coordinators) to choose which categories they had strengths in (3 to 5 categories) and which categories they face weaknesses in (3 to 5 categories).
AGROECOLOGY INITIATIVES IN EUROPE

categories). The dimensions and categories are presented in Table 2 (more extensive description of criteria can be found in Appendix 1), and they are an adaptation of the CERAI’s (2019) criteria for evaluating initiatives. Icons were also created and used as a visual guide to show the strengths and weaknesses of the initiatives.

For the initiatives under Science, the analysis follows more descriptive criteria. These initiatives are divided into “Traineeships and academia” and “Research groups”. Main focus of the analysis is the involvement of stakeholders, which topics are covered and which modality of integration of different disciplines is used. For more details on the criteria used see Appendix 2 and 3.

Table 2. Dimensions, categories and icons used to describe the positive impacts and limitations of the Practice and Movement initiatives. Adaptation of the CERAI’s (2019) criteria for evaluating initiatives.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Category</th>
<th>Icons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td>Natural resources and biodiversity management</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td></td>
<td>Energy and waste management</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td></td>
<td>Health</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Political</td>
<td>Cooperation</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td></td>
<td>Governance</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Economic</td>
<td>Sustainable and fair economics</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td></td>
<td>Commercialization is local, fair and/or collective</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Social</td>
<td>Traditional food and heritage conservation</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td></td>
<td>Society and Equity</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td><img src="image" alt="Icon" /></td>
</tr>
</tbody>
</table>
Conclusive considerations about methodology’s limitations

It is important to mention that the results of this study are based on the authors' interpretation of literature review, of key informants' opinions, emerged during the interviews, and also on the authors' knowledge and experience of agroecology in their country. Although we put an effort in standardizing a solid and well-structured methodology and in providing rigorous guidelines, the number of key informants per country was bounded by the availability of coordinators' time and resources. Therefore, given the number of key informants interviewed, the representation of what agroecology is in the countries remains a partial figure. Partiality and subjectivity are especially present in the analysis of current situation of agroecology in the country, which is influenced by key informants’ and authors’ views. Also, the choice of developing a more qualitative-based methodology, instead of a quantitative-based, comes from our interest to keep a qualitative approach when exemplifying the viewpoints of those people we consider key actors in the development of agroecology. We therefore conclude that our study certainly brings many insights of what agroecology is in each of the countries analysed, but it is also a result of the interpretations of all the people involved in the project.

References


APPENDIX 1 – Dimensions and categories: Practice and Movement

Dimension, categories and criteria used to describe the positive impacts and limitations of the *Practice* and *Movement* initiatives. Adaptation of the CERAI’s (2019) criteria for evaluating initiatives:

<table>
<thead>
<tr>
<th>Categories</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural resources and biodiversity management</td>
<td>The initiative uses techniques/practices that conserve and favor soil fertility; promote efficient water management; avoid contamination of soil, water and air; increase natural biodiversity and protect the ecosystem. They do these practices as part of a holistic approach (e.g. leaving the soil virgin counts as a practice). Limitations in this category could be related to agronomic and technical difficulties such as weed and pest management, etc. Training and awareness-raising is an important line of the project; the initiative does training and awareness-raising periodically on soil fertility conservation, efficient water management and avoiding water pollution and/or increasing biodiversity (agrobiodiversity and wild biodiversity).</td>
</tr>
<tr>
<td>Energy and waste management</td>
<td>Reduction and revaluation of food waste (making compost is revaluation of food waste!) is very much taken into account and measures are being taken to reduce it // It is an important line for the initiative, the initiative does training and awareness-raising periodically Reduction and recycling of organic and other waste is an important line for the initiative, the initiative does training and awareness-raising periodically Use of renewable energies from own or other sources. The initiative produces most of their own energy // It is an important line, the initiative does training and awareness-raising periodically // Less use of fossil fuel // Better energy efficiency through closed loop system of small farms compared to industrial farms Use and/or impulse of short distribution market channels (local) Use and/or promotion of low-carbon logistics/distribution (e.g. distribution by bicycle, carpooling, etc.) and processing</td>
</tr>
<tr>
<td>Health</td>
<td>Produce, sell and/or promote agroecological products (considering social aspects, working conditions, environmental impacts, etc.) Promote and/or grow diversified products and impulse a healthy diet and nutrition</td>
</tr>
<tr>
<td>Political</td>
<td>Cooperation</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|           |             | Participation in associations of consumers or producers (Participatory Guarantee Systems (https://pgs.ifoam.bio/pgs_groups/map?utf8=%E2%9C%93&filter=&status_filter=&country_filter=) and / CSA / Food coop / Syndicate / ...)
<p>|           | Governance  | Participatory research with other actors: university, research centers, etc. |
|           |             | Boost to the process of planning sustainable food, with focus on territory and gender, with participation of all actors of the food chain |
|           |             | Creation of participatory communication public structures, debate and making decision, including civil society, regarding the management of food system in a territory, like Municipal Food Councils. E.g. &quot;Food councils are community-based coalitions, consisting of multiple organizations and individuals, that help promote more resilient food systems.&quot; See further <a href="https://communityfoodstrategies.com/foodcouncil/%7C">https://communityfoodstrategies.com/foodcouncil/|</a>
|           |             | Limitations in this category could be related to the lack of support of public institutions to the initiatives. |
|           |             | Boost /Participation in agreements and development of regulation that guarantee the quality of food, within Agroecology. Limitations in this category could be related to European/national/regional/local regulations. |
|           |             | Develop territorial/national level legislation, policies and programmes that reward agricultural management that protects soil, enhances biodiversity and the provision of ecosystem services. Limitations in this category could be related to European/national/regional/local policies |
| Economic  | Sustainable and fair economics | Income from the activity allows savings and/or reinvestment in the activity itself |
|           |             | There is pay equity (there is not a huge difference between the incomes of the workers / avoid exploitation) |
|           |             | Participation to social solidarity economy networks, and put into practice of its principles (<a href="http://www.ripess.org/what-is-sse/what-is-social-solidarity-economy/?lang=en">http://www.ripess.org/what-is-sse/what-is-social-solidarity-economy/?lang=en</a>) |
|           |             | Promotion or use of diversified markets are established (for practice: to have a variety of income sources) |
|           |             | The initiative helps the local economy of the region. Limitations in this category could be related to the lack of funding/subsidies for the initiative. |
|           | Commercialization is local, fair and/or collective | Final price that covers the costs of: production, transformation, commercialization, distribution and administration |
|           |             | Promote and make use of local procurement channels etc. to prioritize local markets and support local economic development |
|           |             | Promoting the use of a non-monetary economy |
|           |             | Access to local food is easy and sustainable (and/or agroecological) for all (both economically and physically), with special emphasis on the most vulnerable groups. |
| Social    | Traditional food and heritage conservation | Promote, market and/or consume varieties, traditional breeds |
|           |             | Consider traditional knowledge and gastronomic culture in local food production/processing/marketing |
|           |             | Recovery, dissemination, exchanges and meetings where traditional knowledge is shared and knowledge exchange networks are strengthened. |</p>
<table>
<thead>
<tr>
<th>Society and Equity</th>
<th>Help people and/or groups risking social exclusion into work integration. Limitations in this category could be related to the land access issues.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Personal and/or family conciliation of family and farm works are carried out equally by men and women.</td>
</tr>
<tr>
<td></td>
<td>Horizontal and participative decision making. All genders are equally involved in decision making. Limitations in this category could be related to gender issues.</td>
</tr>
<tr>
<td>Education</td>
<td>Workshops and activities of promotion of agroecology.</td>
</tr>
<tr>
<td></td>
<td>Training and accompaniment to agri-food initiatives.</td>
</tr>
<tr>
<td></td>
<td>Training and advice to public institutions.</td>
</tr>
</tbody>
</table>
APPENDIX 2 – Criteria for Science pillar: Traineeship and Academia

The following criteria has been used to analyse the initiatives under Science Pillar, specifically those related to “Traineeship and academia”.

<table>
<thead>
<tr>
<th>Type of approach</th>
<th>Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theoretical</td>
</tr>
<tr>
<td></td>
<td>Both</td>
</tr>
<tr>
<td><strong>Who is training</strong> (only for traineeship)</td>
<td>Farmers</td>
</tr>
<tr>
<td><strong>Who is the training ship for</strong> (only for traineeship)</td>
<td>Farmers</td>
</tr>
<tr>
<td><strong>OBJECTIVES</strong></td>
<td>Training and accompaniment towards a food sovereignty model</td>
</tr>
<tr>
<td></td>
<td>Training and accompaniment to agri-food initiatives</td>
</tr>
<tr>
<td></td>
<td>Training and advice to public institutions</td>
</tr>
<tr>
<td><strong>TOPICS COVERED</strong></td>
<td>TECHNICAL ASPECTS</td>
</tr>
<tr>
<td></td>
<td>ECO-ENVIRONMENTAL ASPECTS</td>
</tr>
<tr>
<td></td>
<td>SOCIO-ECONOMICS ASPECTS</td>
</tr>
<tr>
<td></td>
<td>CULTURAL POLITICAL ASPECTS</td>
</tr>
<tr>
<td></td>
<td>POLICY ASPECTS</td>
</tr>
<tr>
<td><strong>How is the programme/traineeship integrating different disciplines related to agroecology?</strong></td>
<td>It only focuses on one scientific disciplines (for example if the course only is about agroecological practices).</td>
</tr>
<tr>
<td></td>
<td>It integrates scientific disciplines that are closely related between them (for example if the course it integrates ecology and agronomy).</td>
</tr>
<tr>
<td></td>
<td>It integrates scientific disciplines that are not closely related between them (for example if the course integrates ecology, agronomy and sociology).</td>
</tr>
<tr>
<td><strong>Type of educational approaches:</strong></td>
<td>passive</td>
</tr>
<tr>
<td></td>
<td>teachers is a facilitators and student knowledge is valued</td>
</tr>
<tr>
<td></td>
<td>not only students are in the academia, but also other stakeholders are integrated</td>
</tr>
<tr>
<td><strong>Positive impacts</strong></td>
<td>Open</td>
</tr>
<tr>
<td><strong>Limitations</strong></td>
<td>Open</td>
</tr>
<tr>
<td><strong>What we can learn</strong></td>
<td>Open</td>
</tr>
</tbody>
</table>
APPENDIX 3 – Criteria for Science pillar: Research Groups

The following criteria has been used to analyse the initiatives under Science Pillar, specifically those related to "Research Groups".

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>Open</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOPICS COVERED</td>
<td>TECHNICAL ASPECTS</td>
</tr>
<tr>
<td></td>
<td>ECO-ENVIRONMENTAL ASPECTS</td>
</tr>
<tr>
<td></td>
<td>SOCIO-ECONOMICS ASPECTS</td>
</tr>
<tr>
<td></td>
<td>CULTURAL POLITICAL ASPECTS</td>
</tr>
<tr>
<td></td>
<td>POLICY ASPECTS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Which stakeholders are you collaborating with</th>
<th>farmers</th>
<th>social movement</th>
<th>NGO</th>
<th>governmental bodies</th>
<th>...</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Collaboration with stakeholders</th>
<th>The knowledge, opinions, values, interests are discussed and feedback among different stakeholders and the researcher are shared</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The knowledge, opinion, points of view of the stakeholder(s) are discussed among each other but there is not a discussion with the researcher.</td>
</tr>
<tr>
<td></td>
<td>The knowledge, opinion, points of view of the stakeholder(s) is only used but there is no process of feedback or discussion.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Integration of different disciplines</th>
<th>It is understood that it would be important to integrate it.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Different disciplines that are not closely related are used and their co-construction of the problem and tools used.</td>
</tr>
<tr>
<td></td>
<td>Different disciplines that are closely related are used and their co-construction of the problem and tools used.</td>
</tr>
<tr>
<td></td>
<td>Different disciplines that are not closely related work in the same project but only focusing on solving one part/aspect of their project</td>
</tr>
<tr>
<td></td>
<td>Different disciplines are not closely related work in the same project but only focusing on solving one part/aspect of their project</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of output</th>
<th>Open</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limitations</td>
<td>Open</td>
</tr>
<tr>
<td>What we can learn</td>
<td>Open</td>
</tr>
</tbody>
</table>
Agroecology initiatives in Albania

Stella Beghini

1. Current state of agroecology in the country

Albanian agriculture faced drastic changes in the past decades, shifting from a communist regime where the state was orientating the agricultural production intended to maximize internal demand and consumption, to a private-based agricultural model in the 1990s. From the 1960s, an intensive production system based on large state-owned and collective farms where the rural population was forcibly assembled in production cooperatives was adopted through the country: agriculture system was highly subsided by the state, promoting practices close to an industrial model. Access to synthetic inputs and tools was guaranteed in order to maximize the productivity.

The fall of the communist state in 1991 led, above many other measures, to the privatization of the state-owned land, enabling rural dwellers to become landowners and private farmers. This process led to a privatization of 94% of the land by 1994 and to 470,000 private farms: as a result, private property results quite uniform and small-scale and, in average, a farm consists of 1.3 ha [1]. From one side, this has shattered the national industrial field crops productivity (rice, cotton, tobacco and wheat), on the other side rural families could have a secure asset to provide food for subsistence and some income for local sales, becoming, to a certain degree, also a food basket for the family relatives who had moved to the cities and strengthening the connection to the land. Land fragmentation, in that context of transition period, led to a product diversification, benefitting food security at household level [2]. The production was organic by default, as external inputs were not available or too costly. Nowadays, the structure of land property remains more or less the same, with small-scale farms and a quite diversified agricultural systems. From the 1990s, moreover, there has been a serious emigration from rural areas, combining emigration towards urban areas and foreign emigration. It is calculated that around 900,000 people left rural areas between 1990 and 2016 [3], with the mountainous regions being the most hit by the phenomenon.

The mentioned process has shaped Albanian agriculture and rural society, with consequences that still remain today. Organic agriculture gained attention during the first years of the “transition” period, as it was also considered a farming model close to the Albanian one and a promising model for export opportunities. In 1997 the Organic Agriculture Association [4] (OAA) was founded by a group of agricultural specialists of Tirana and some farmers, and in the first years they involved a number of farms adopting organic practices according to the European regulation. In 1999, a first international project (SASA – Sustainable Agriculture Support in Albania), involving the Swiss research center on organic agriculture FiBL, was launched, with the aim of eventually developing a national legislation for organic production and boost the demand of organic certified products. With the constitution of the BioAdria
association in 2006 under the SASA project, specifically aimed at research and assistance to farmers, the network of organic farms grew. In the same year, Albinspekt [5], the first and only national organic certification body, was formed. In 2004, the first national law on organic production is approved. In 2010, BioAdria became a project-independent association and the Institute of Organic Agriculture [6] was founded in Dürres. While the sector of organic medicinal herbs, fresh herbs and olive oil has found remarkable success, due to the export market (mostly Switzerland and Germany), the domestic market for certified organic products such as fruits and vegetables, has not developed at the same pace. Indeed, after the years 2010-2011, when there was the highest number of organic certified producers in Albania, organic farms have started to drop, mostly due to lack of financial means and a difficulty, for small-scale farmers, to get subsidies [7] entitled to organic conversion and certification. Others informants, such as the president of the OAA, report low consumers awareness toward organic certified agricultures: Albanian people tend to prefer local, traditional food, considering it “natural” and “organic” by default. Few consumers are actually aware of the meaning of the term “organic”. In general, there is a weak marketing chain for certified products, with few fresh rooms capacities and specialized stores.

In this context, the term “agroecology” is not frequently encountered among people engaged in agriculture and food issues. Agro-ecology seems indeed to be considered in the strict terms of the study of agro-ecosystems, embedded in scientific discipline and regarded as a research topic rather than a holistic approach for agricultural and food systems change, involving social participation and political action. However, some social issues consistent in agroecology, such as rural territory development, traditional food and gender equality, gain attention and social cohesion in Albanian organizations and networks.

For the reported reasons, there is no evidence in a more developed region in terms of agroecology. Some areas have witnessed a specialisation of productions, especially some farms serving the food demand of Tirana and Dürres and number of them is certified organic. Distance to urban areas might, however, influence the development of stronger movements and direct connections between farmers and urban consumers.

Agroecology, per se, seems not to be recognised among citizens and civil society movements, but it is confined as a scientific approach related to the study of agro-ecosystems. On the other hand, there is a general momentum in civil society movements related to environmental threats in rural communities, such as plans of constructions of dams for hydroelectric power [8] that would undermine the rural livelihood of those areas. Other issues related to the protection of natural spaces close to the capital Tirana against urbanization are encountering the attention of civil society movements. These movements are then actively related to the protection of rural livelihoods and against the abandonment of rural territories.

At the decision-making level, agroecology is not much recognised, as the approach is struggling to be spread among practitioners and policy-makers. Policy measures do intervene in organic production regulations, agro-tourism and specific topic related to agricultural development, but do not sum up in comprehensive measures in a strategy for agroecology in the country.

The main challenge for the development of agroecology in Albania is the poor development of a common understanding of agroecology and a common work path between civil society
organisations, researchers and farmers. Some informants are saying that a lack of a protocol, like organic agriculture, does not help in disseminating it and that academia is quite specialised and does not offer transdisciplinary studies. However, connections between different initiatives with a common goal could foster the movement towards a more sustainable agricultural and food system development.

Albania’s context is here analysed in different categories. The intent was to collect as many information as possible about initiatives and organisations in the field of issues related to agroecology. As stated before, the understanding of the concept of agroecology is challenging due to little familiarity of the approach among stakeholders, but here there are some cases worthy to be remarked.

1.1. Social movements
From the mapping process, it results that there is no movement that is directly working towards agroecology in the country, or that is explicitly considering agricultural and social issues with the lenses of agroecology. At national and regional level, farmers are still reluctant to undertake joint activities, for instance in the form of associations and cooperatives, due to the experience of forced cooperatives during the communist system. The European Coordination of la Via Campesina (ECVC), an umbrella organisation of peasants’ organisations in Europe, does not have any local focal point in Albania. The Organic Agriculture Association, founded to promote organic agriculture in Albania, does not count any farms as members of the association, and in the last years it has concentrated more on the advocacy for a sustainable use of natural resources. However, information from interviews gathered a context where issues close to agroecology (environment, food sovereignty, rural livelihoods, gender equality) are considered important among civil society organizations. For instance, the Albanian Network for Rural Development (ANRD) is a “a civil society initiative to promote and revive community-led rural development through advocacy and initiatives in the formulation and implementation of sustainable rural development policies with the final aim improvement of the quality of life of rural communities in Albania [9]. The members of ANRD are various local non-profit organization, associations, and also international NGOs (mainly Italian, such as VIS, IPSIA, COSPE and CESVI) concerned for development of economic opportunities in rural areas. The global movement of Slow Food is also present in Albania, counting two typical product, and a network of restaurants engaged in promoting and reinterpreting the local food culture, such as “Mrizi i Zanave”, in the Zadrima region (see initiative). However, these different entities are not summing up in a bottom-up movement aiming at consolidating agroecology in the country. The FAO’s division for Central Europe and the Balkan area, is actually working in concentrating actions in key issues (gender, traditional products incubators and others) and mainstreaming the concept of agroecology.

1.2. Agroecological practices
Practices close to agroecological techniques are generally embedded in the small-scale Albanian farming system. These are usually based on a diversified production in terms of crops, fruits and livestock breeds, and a rich culture of home-made products, consumed by the family or sold locally. The use of local adapted crops and local animal breeds is still quite common (for instance the white maize variety “Reç”, used to make bread), and mixed cropping
systems are generally adopted in order to guarantee a diversified production. However, these practices might be accompanied by an uncontrolled use of external inputs, such as synthetic pesticides, and farmers tend to lack the knowledge of the correct use of them. A number of farms have adopted organic agriculture, such as the livestock-products specialised farm “7 Springs” [10] in the North of Albania, and others are inspired by permacultural principles, such as the Uka Farm [11], outside Tirana.

1.3. Alternative markets and local product market channels

Alternative markets chains and direct consumer-producers relationship are not fully developed in Albania. There is no evidence of CSA models or Participatory Guarantee Systems in place, but there are some best practice worthy to be noted. For instance, some restaurants [2] and shops from Tirana develop menus and products from farm that they directly manage or from a network of trusted farmers, mostly following principles of ecological agriculture. Some practices of urban agriculture in Tirana area are collected in the database [2] of the Interreg project “Agri-madre: Metropolitan agriculture and food systems in the Mediterranean”.

Other experiences, such as the association AgroPuka, in the mountainous areas of the Albanian Alps, help in the “marketing, training, advice, and assistance infrastructure of agriculture. The organization supports the collection, processing of agricultural products typical from the mountains and the marketing in urban shops”.

Moreover, FAO’s local offices are aiming at promoting innovative short food value chains and to pilot them in some municipalities. The program involves the promotion of agro-touristic food chains, and promotion of authentic products specifically produced by rural women, smallholders, and start-up promotion for rural youth.

2. Initiative Analysis

In the next pages the initiatives selected will be analysed.

Local Community Genetic Bank, Bushat, Vau Dejes Municipality

Contact details:
Bushat, Vau Dejes Municipality
Email: albania@cospe.org
Email: sokraitjani@yahoo.com

General description

This initiative is based in the “Ndre Medja” Professional Agricultural School, the only high school in Northern Albania focused on agriculture and veterinary education. The experience started in 2017, among the activities of the project “Alliance for the development and the
valorisation of family agriculture in Northern Albania”, funded by the Italian Cooperation and implemented in Zadrima by the NGO COSPE. The School partnered as well with researchers from the Institute of Plant Genetic Resources of Tirana, who are providing scientific technical guidance. The Municipality of Vau Dejes is also involved in providing assistance to the project.

The main focus of the project is the research and collection of local varieties of cereals and vegetables, to reproduce them and to share within farmers in Northern Albania. Plants are reproduced in the demonstration field of the school and in the private field of selected farmers. Moreover, the Community Genetic Bank of Bushat is now the focal local point of the Institute of Plant Genetic Resources, facilitating a network of farmers, “seed savers” and other actors in Northern Albania. The project is planning to expand the study also to local cultivars of fruit trees and to acquire data on the adaptation of local varieties to climate change.

This experience has brought many students, citizens and farmers in being interested in the local agrobiodiversity and to connect with traditional agricultural practices, such as intercropping, and with traditional gastronomic heritage.

What can we learn

The Local Community Seed Bank improves the accessibility and knowledge on local varieties of cereals and vegetables. Farmers are interested in varieties adapted to the local agro-ecological conditions. Moreover, it brings a practical connection with the youth and the students who are coming from the rural and mountainous area of the region.

Positive Impacts

The initiative is building a network between local NGOs, Research Institutes, group of farmers (mainly converting to organic farming) and rural youth, with the aim of promoting the local agrobiodiversity and its importance for agricultural practices and cultural heritage.

The demonstration field in the school, used for the reproduction of seeds to be saved and in the Bank in the school, is also using agro-ecological and organic practices (rotation of crops, organic fertilisations, and natural pesticides). A meteorological station is also located in the field, which gives information of weather patterns to the local farmers.

The focal point of the initiative is the research, collection and distribution of seeds of local varieties of a number of crops, such as wheat, corn, beans and other leguminous plants, eggplants and tomatoes. A number of them have been collected from local farmers, others were donated by the Institute of Plant Genetic Resources of Tirana. A part of the project is also dedicated to the promotion of agrobiodiversity among consumers, for cultural and touristic initiatives.
Limitations

A discontinuity in funding may be the biggest limitation for the project, in particular to fund focal technical personnel dedicated to the project, dissemination activities and *in situ* extensive researches.
Mrizi i Zanave Agroturizëm

Contact details:
Mrizi i Zanave
4505 Fishtë, Lezhë, Albania
Phone: +355 69 210 8032
Website: http://www.mrizizanave.al/

General Description

Mrizi i Zanave is a popular agro-tourism with restaurant and guesthouse in the village of Fishtë, in the Zadrima region in Northern Albania. The Prenga brothers, after several years of experience in the food industry in Italy, came back to the family native village to start a new business, based on traditional genuine food created with local ingredients.

The business comprehends a productive farm, AgroFishte, with a number of crops cultivated (cereals, vegetables, fruit orchards) in the area, stables with a diversity of animals (cows, pigs, donkeys, goats, poultry) and a renovated structure dedicated to the transformation and processing of products, with a cheese factory, a laboratory for fruits and vegetable processing, and a wine-cellar. Since 2018 the farm is converting to organic production.

Ingredients are also sourced from a network of around 100 farmers and collectors of wild plants, fruits and mushrooms, providing on a daily basis fresh products for the restaurant. The restaurant has a sourcing agreement with them, guaranteeing therefore a safe sale each year. The team is also helping in getting better food quality standards and planning productions, enabling farmers’ families in getting

Mrizi i Zanave is one of the most active Slow Food Convivium in Albania.

What can we learn?

This initiative has sparkled an interest toward local food based on the quality of primary ingredients, where farmers and rural communities are important custodians of traditions. The network and their active role in the daily work with them is one of the most relevant pillars of Mrizi i Zanave’s philosophy. The restaurant is also offering meals and “agro-touristic” experiences at affordable prices to most families in Albania.
Positive impacts

Secure income for farmers and workers have caused a positive economic effect in the area. The initiative is reinvesting the profits in restoring a guesthouse and productive buildings, in order to be able to offer a more diversified range of locally produced products.

Local varieties of vegetables, cereals, fruits and indigenous animal breeds are preferred for the use in the kitchen. The best varieties for gastronomy are researched and cultivated in the farms. Collection of wild plants and mushrooms is also fundamental backbone for the choice’s ingredients.

Among the farms’ products, the restaurant is also selling products from other local farms and other small companies that are producing typical products in Zadrima (pottery, cosmetics, textiles). This is also connecting touristic tours offered to tourists who have started to be interested in the region.

Limitations

Training courses are often lacking for the farmers that are sourcing the restaurant, in sustainable and organic agriculture practices and food quality standards. Training and educational exchanges could provide better tools for the farms.

Coordination with local farmers is sometimes difficult.
3. Bibliography

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Austria
Agroecology initiatives in Austria
Jakob Katzlinger

1. Current state of agroecology in the country

1.1. Background on current state of (organic) agriculture

In the beginning of 2019, the Austrian population was nearly 8.9 million [1]. The total area of Austria is 83,878.99 km², of which about a third (2.67 million hectare) is utilized agricultural area (with about half grassland, half farmland) and about 40 % of the total land is forestry area [2]. Thereby, most of the agricultural land (over 60 %) can be classified as unfavorable, disadvantaged mountainous regions [3]. The Austrian agriculture is still mostly small-scaled structured compared to European standards, however, the average farm size (45.2 hectare in 2016 compared to 18.8 hectare in 1951) is still increasing [2]. Combined with a declination in the number of farms, as in most European countries, it has led to structural changes and larger concentration of land ownership [3]. More than one half (55 %) of the Austrian farms are currently run by part-time farmers, while only 36 % of farms run as professional farms. Further, most farms are family owned and about a third (32 %) are run by woman [2].

Austria has one of the highest shares of organic agriculture. Thereby, organic agriculture has a long history in Austria, with the first pioneering farms already existing in 1927. The number of organic farms kept relatively low until the eighties, followed by the main increase in the nineties. This boom of organic agriculture in Austria can be traced back to the start of organic subsidies in 1991, which led to an increase of more than eightfold in the number of organic farms between 1990 and 1994. Another significant impact in the rise of organic agriculture played the beginning of marketing of organic products in the big supermarket chains in 1994. When Austria joined the European Union in 1995, the subsidies for organic farms was further increased, leading to more than another 5,000 farms that switched to organic agriculture. This boom in organic farming has led to a professionalization and conventionalization of organic agriculture since the beginning of the nineties [4]. In 2018 about 23,477 (21,3 %) of all farms are cultivated (partly) organic, with a total size of 637,805 hectare of organic farmland. That are about 25 % of the total agricultural land area [2], which is distinctly above the total European share of organic farmland.

1.2. Background on recognition and challenges of agroecology in Austria

The German term Agroecology ("Agrarökologie") is an old term and has its roots mainly in science. In 2011 with the first European Food Sovereignty Forum in Krems, Austria, the term became more popular within social movements and practitioners. Today the term agroecology is still very uncommon and not many people can associate something with it. This is mainly
due to the high share of organic agriculture in Austria, as these terms are more commonly understood and therefore used by different groups. Hence, even some organic farmers might practice agroecology, they do not use the term itself. This holds also good for farmers that work together with scientists or social movements and therefore are often familiar with the term, but rarely use the term agroecology either.

Looking at the present state of agroecology in Austria, Interviewee 4 stated that one has to differentiate between the “inner perspective and an outer perspective”. While Austria is often represented as being very agroecological and the official agricultural policy tries to communicate agroecology to the outside, it is not communicated to the inside of the agricultural sector in Austria. This can be for example seen by the conventionalization in organic agriculture as described above, as agroecology is deeply linked with (the principles and values of) organic agriculture in Austria. This is especially critical, as organic agriculture, opposite to agroecology, is based on minimum requirements leading some farmers to work on the edge of what is still possible in some areas while losing the whole picture of organic agriculture, such as the “closed system” approach. Agroecology on the other hand is not regulated nor is the term “agroecology” protected by law which as a result can be easily misused [5]. This fear was especially emphasized by some key informants, as the term “agroecology” and the understanding of its concept is not very recognized among people. Interviewee 1 referred thereby to the term “food sovereignty” that is already misused by a main supermarket chain in Austria on some of their products for advertising.

Going more on regional and local scale, one might see differences in the agroecological state in Austria. First, as described above, some regions are more favorable for agricultural intensification than others, such as the mountain regions. Therefore, one might find a higher share of agroecological farms in these areas with extensive agriculture as these have fewer external inputs. Second, more agroecological farms and awareness among citizen on agroecology might be present in specific ecological/organic regions, such as the “Ökoregion Kaindorf” or the “BioRegion Mühlviertel”. In the former, also specific workshops, conferences etc. on topics related to agroecology, such as on humus formation, are frequently held. On the other hand, the latter has a long history of many organic farms. One common thing is that in these regions, organic agriculture is often seen on territorial scale as chance for regional development instead of a marketing strategy. And third, similar to the former, some pioneers and active people or social movements in agroecology might influence others in his or her area (see e.g. Zerfuchs down below). This plays a crucial role, as it is easier to change something on local scale or on community level than on national scale.

According to the key informants, the major challenges and limitations to agroecology are very widespread. One major problem is that increasing the productivity of an area in form of a bigger harvest for higher profits is still the common doctrine in agriculture. This is also connected with an increased capital investment of farmers in for example a bigger stable, for which many have to take out a big loan, making it more difficult to come out of that system. Other limitations are the constant decline in number of farms, while an increase in farm size; urbanization, as a lively rural area is needed for a discussion of how food is produced; the difficult access to new scientific findings in the field of agroecology to farmers; the high share of supermarkets; the disinterest of the chamber of agriculture and the “Bauernbund”; and in general the political unwillingness in this field.
The next part will give an overview on the current situation on agroecology in various aspects, followed by six example initiatives from the different areas of science, practice and movement.

1.3. Social Movements

The social movements related to agroecology have often a main focus on food sovereignty and a change of the current way of food production, distribution and in general a change in the current food system. Classical examples are, besides the initiatives described in detail in the next chapter, AgrarAttac or food councils (currently existing in Innsbruck, Vienna and Upper Austria). Many of these social movements are for a whole basic transformation of the agricultural and food system, in which agroecology plays a key role.

At the same time, some key informants claimed that some social movements, as for example in the field of organic agriculture, do not work with agroecology movements or at least do not use the term “agroecology” in their work and publications. With the current change in climate and the effects on farmers, this might change as some networks were brought closer together to fight for agroecology as a way to tackle climate change. This is important, as according to Interviewee 6 the main agricultural lobby sees themselves often only as victim of climate change and are therefore unwilling to change their system, instead increase the use pesticides and so on.

1.4. Agroecological Practices

Most agroecological practices that farmers use on their farms are not defined as being agroecological by the practitioners themselves, as the concept of agroecology was for a long time little known in Austria and the term agroecology is hardly used in discussions among farmers. As many farming approaches, such as the reduction of external inputs, are agroecological by nature, these are also referred to as “proto-agroecological practices” [6] in literature. Some of these proto-agroecological practices can be seen in different scales among farms in Austria.

According to Interviewee 7, the agroecological practices are in Austria compared to other central European countries similar or in some areas even better. This is mainly due to the unfavorable conditions for agriculture and therefore the limits in intensification in agriculture. Another reason is the high share of organic farms as agroecological practices are mostly applied by organic farmers as part of creating a “closed system” [5]. Moreover, most of the agroecological practices applied are related to organic agriculture itself, such as the reduction or prohibition in the use of external inputs like pesticides, or the promotion of diversity on the farm. While some practices could be relatively easily applied on more farms, such as no-till or reduced tillage approaches, other practices, such as agroforestry, are not very popular yet and need more research in application in Austrian context.
1.5. Alternative markets and local product distribution channels

The share of alternative markets in Austria is mainly limited by the high share of supermarkets, as currently three supermarket chains control over 80% of the market [7]. Alternative markets are further limited as one can also find a high share of local and organic products in supermarkets as interviewee 4 pointed out. This leads to the fact that only about a quarter of all farms in Austria (27%) are active in direct marketing. With increasing interest of consumers in direct producer-consumer relationships, a small group of farmers are more and more focusing on that trend and could earn about 51% of their income through direct marketing. But the majority of farms (73%) is not active in direct marketing, with only a very small share of farms are willing to enter direct marketing. Main reasons for that are the high statutory requirements; minor rentability and the little demand of consumers; lack of time; and the little willingness of customers to pay the price [8].

Looking at farms that are active in direct marketing, most is done by farm gate sale (77%), followed by delivery (18%) and gastronomy (16%). Alternative markets, such as food-coops play thereby a minor role with only about 1% of all farms involved [8]. But a phase of changing consumer-producer relations with different civic food networks of critical consumers and (post) organic farmers can recently be observed [9]. In fact, Austria has currently about 89 food-coops [10] with about a third of them located in Vienna, and about 28 different forms of community supported agricultures (CSAs) [11]. Thereby, CSAs share many aspects with the Nyeléni Agroecology declaration [12]. Further, especially in CSAs and food-coops, the products are diversified, local and seasonal, cultural adapted and guarantee a fair price for consumers and producers (see also at the initiative “Biohof Zerfuchs” down below).

According to Interviewee 4, determining factors should be created that make it first possible for farmers to find a suitable value chain for marketing agroecological products to be able to sell them. As these value chains cannot always be directly between producers and consumers, other forms such as alternative supermarkets or cooperatives as in the case of “Bioalpin” [6] are needed.

2. Initiative analysis

The following pages give insights into some of the leading initiatives on agroecology in the different fields of practice, social movements and science in Austria. At this point I want to highlight that in practice, there exists no “pure” agroecological initiative, rather it is the degree of agroecology that matters [6].

Information on the first two initiatives was gathered by interviews with them. The next two initiatives are described by one person from the initiative itself. The information on the last two initiatives was gathered mainly by online research and one interview in case of initiative 6.
Zerfuchs

**Contact details:**
- Phone: +43 676 7535214
- Website: http://www.zehrfuchs.at/
- Email: office@zehrfuchs.at
- Facebook: /solawi.zehrfuchs.at

**General Description**

Zerfuchs is an organic Community Supported Agriculture (CSA) in the south of Austria that produces vegetables, apples, apple juice and vinegar since 2013. In 2019, they had 90 families as shareholder. Since 2019 they have also offered milk products, meat and eggs from partner farms in their pickup place. Besides Christoph and Ingrid as farm owners and main farm worker, they also employ one part-time worker and one apprentice.

One of the main objectives of the initiative is to create an intern stable and resilient system and hence gain healthy food. This influences their farming techniques in many ways, starting already by only using open pollinated seeds and peat-free soil for nursing of young plants. Further, they focus on humus formation such as through vegetable cultivation in mulch, the use of MC-compost (which supports microbial carbonization) and the fertilization according to the work of Albrecht Wiliam. Other specific topics are the use of rolling high tunnels as well as the cultivation of winter vegetables. The second main objective of Zerfuchs is to maintain a community that stands for a positive change and to create a regional rethinking.

Zerfuchs is mostly active in the area of about 20 km around the farm. For example, the local kindergarten comes every year for a visit. Besides the impact on local scale, the initiative gives also talks to e.g. farmers or agricultural students in other regions of Austria and abroad, where they cover topics such as humus formation on the farm or about the own production of a rolling high tunnel. Further, they specifically work together with the organic association Bio Austria, the ecoregion “Ökoregion Kaindorf”, the organic vegetable farm “Gemüsehof Dickendorf” (specifically on the topic mulch), and with other colleagues in the field of regenerative agriculture.

The initiative is very successful in its uncompressing ecological way, which can be seen in many aspects. This is supported by the community that sustains the farm through the CSA and the direct “customer” relationship but also the good relationship between Ingrid and Christoph and their belief in its success.

**What we can learn**

The initiative is a good example of combining ecology with economy in a successful way. This is deeply connected with a different economical systematic, and the understanding of nature.
AGROECOLOGY INITIATIVES IN AUSTRIA

and its collaborative benefits. Further, family and the social environment are functioning as central strength and impulse in innovation, as it enables actions out of security.

Positive impacts

The initiative has a positive impact on health of the land and further the plants, as the health of the soil has an impact on the health of the plants. This is achieved by the production of vegetables without the use of artificial spraying and the buildup of soil.

The initiative cooperates with other farms, who can provide their products also in the pick-up room of the CSA. This leads to a big range of goods per vegetable pickup and to synergy effects among the farms. Further, the initiative also sees the cooperation at their members.

One characteristic of CSAs, such as the initiative has, is the “fair price”, as the price is resulting from the total budget of the members for the whole season or year. The commercialization is local, as the community area is within 20 km, which use car sharing to come to the farm. Further, also the partner farms are located locally.

The initiative has a positive impact on traditional food and heritage conservation by only using open pollinated seeds, offering rare varieties and seasonal eating.

Education is a main aim of the initiative, offering workshops and activities to promote agroecology among different groups of people, such as other farmers, students and so on.

Limitations

Although the initiative has a high focus on managing and increasing the natural biodiversity, it has certain limits to them. Currently, they try to convert an intensive orchard into a project similar to forest gardens. One of their challenge for the initiative thereby is that the diversity in agroforestry is difficult to implement, as these are only small areas and due to neighbor protection law.

According to the initiative another limitation in managing biodiversity on the farm according to the initiative is the fact that flower strips are extensive agricultural areas, but the initiative is working biointensive.

Last but not least, the initiative couldn’t manage creating certain retreat areas for beneficials (e.g. the least weasel).
**General Description**

The initiative Krautwerk started their farm in 2012 on 0.35 hectare. Until 2018 they farmed 3 hectare of organic vegetable production. In 2019, they reduced their size to 1 hectare and changed to market gardening on permanent beds (with a constant bed width of 75 cm, and ways in between the rows). Further, they got rid of any heavy machinery (except there two-wheel tractor) and changed to bio-intensive agricultural production. For example, all the seedling is done per hand or with hand seeding machines. With the fast rotation of the beds, they can achieve on a smaller area more harvest than before. Together with the two unheated polytunnels, they produce seasonal vegetables all year round, even in winter. Therefore, from spring to autumn the polytunnels are used for vegetable production such as tomatoes and egg plants. After, they quickly switch to the production of winter vegetables in the polytunnels. With this method, they can offer year-round fresh vegetables, instead of stored vegetables.

The family farm is run by Robert and his wife Claudia together with their daughter, who together form Krautwerk. From May to October, they get assistance from another four part-time workers. All the vegetables are directly sold, non over supermarkets. Most (about 70% of their products) is sold directly on Saturday on the farmers market “Karmelittermarkt” in Vienna and the rest (about 30%) is sold to top gastronomy. The latter might increase over the coming years, as they are in direct contact with many cooks. In 2018, their annual revenue was about 130,000 € on their 1 hectare.

The main objectives of Krautwerk are to preserve old, traditional plant varieties and cultivation techniques. Therefore, Krautwerk has its focus on the rediscovery of rare plant varieties, with producing about 300 different types of vegetables, including many old, traditional and heirloom plants. Another aspect is the return to traditional, natural cultivation techniques, such as market gardening or the production of winter vegetables.

Krautwerk is mostly active in the region of their farm and in Vienna where they sell most of their products. Besides other 10-15 small-scaled farms, the initiative works together with other research projects from Arche Noah (an initiative focusing on the protection of heirloom species), the research center Zinsenhof and the organic association Bio Austria.

Over the years, Krautwerk could achieve a high quality of their products, with a big diversity of vegetable varieties. Today, Krautwerk is well recognized for that on the farmers market, in gastronomy and beyond.
What we can learn

The initiative is a good example of a successful biointensive agricultural farm, run as a market garden with focus on the biodiversity of crops. This is for example linked with a good cropping plan, exact calculation of the amount of seeds and seedling needed, or the marketing that the whole farm has a name and is well recognized e.g. on the farmers’ market. Thereby, Robert and Claudia are new entry farmers with no real agricultural background.

Positive impacts

With their special farming techniques and their focus on diversity, Krautwerk has a high positive impact on natural resources and biodiversity. Through the selection on the cultivation of a variety of crops, their cultivation techniques or the specific creation of flower strips, they focus on preserving the existing biodiversity and try to enhance it further.

Krautwerk has a positive impact in education by giving lectures for example on conferences on topics related to market gardening. Thereby, the initiative specifically wants to show an alternative to the common agricultural system, such as showing that a small structured farm can already generate a lot on a small area, which is contrary to the common agricultural doctrine that a farm has to grow to earn enough revenue.

The positive impact of Krautwerk in traditional food and heritage conservation is deeply connected with their objective in preserving traditional crop varieties and preserving and disseminating traditional knowledge, such as specific farming techniques. Thereby, the initiative specifically wants to cultivate, preserve and select plant varieties, not just on their farm, but also that these varieties are preserved instead of getting lost on markets and in gastronomy.

Limitations

One difficulty of the initiative in managing natural resources is the use of water, especially with the change in extreme weather events, such as heat periods or the absent of frequently rain events. As vegetables are often high demanding in water, Krautwerk is constantly looking for new ways to overcome that problem.
General Description

The ÖBV was founded in 1974 as an association by small and mountain farmers in Austria. From the beginning one main objective was to give a voice to the specific interests and needs of mountain farmers in Austria. The ÖBV is independent from parties and works as a grassroot organization to offer a platform of and for peasants in Austria. In the 1970s the ÖBV played an important role in the implementation of the “Bergbauernzuschuss” (a subsidy for farms in disadvantaged and mountain areas). The ÖBV promoted alternative development models for peripheral regions and marginalized peasants (“autonomous regional development”).

In the 1980s the ÖBV was involved in the foundation of the European Farmers’ Coordination (CPE, since 2008 ECVC) in Europe, which is the regional member of La Via Campesina since 1993. The ÖBV promotes food sovereignty and agroecology through different ways and at different scales (local, national, transnational) and vis-à-vis different actors and institutions. One main focus of the ÖBV is emancipatory popular education in the tradition of Paulo Freire. Farmers – men and women – have to speak for themselves and have to be active part in the development of their own history. The ÖBV creates a space and a structure to realize this. This involves an emancipatory peasant identity, rather than being a passive recipient. The second main focus is the political work of the ÖBV. The ÖBV is involved in the resistance against neoliberal trade policies (WTO, free trade agreements, etc.) and against agricultural policies which favour the interests of industrial agriculture and big landowners. The ÖBV is involved in alliances (e.g.: “Anders Handeln” and “Wir haben es satt”) with other organisations (other peasant organisations, Nyéléni-movement for food sovereignty, trade unions, environmental, developmental, feminist, activist-scholars, climate movement, consumer networks).

The ÖBV has an own journal, which is called “Wege für eine bäuerliche Zukunft” to create an own platform for discussion and communication. The structure of the ÖBV: there is a board of peasants, an office in Vienna with four part-time employees, working groups in different issues (women, agricultural policy, peasant rights, etc. etc.) and regional groups. One of the most active groups within the ÖBV is the women working group.

What we can learn
Importance of a peasant organization which creates a space which enables peasants (men and women) to speak, think and act for themselves. Through the creation of alliances and
networks it is possible to change society and to struggle for conditions which are in favour of agroecology. There are a lot of limitations of agroecology which are beyond the local context.

Positive impacts

Promotion of ideas, concepts and debates around important issues of agroecology and food sovereignty, as well as an organisational space to develop and realize these ideas. Defense and development of a “peasant way of thinking” and sharing of ideas. Co-production of knowledge and different ways of knowing are an important basis for agroecological practices. The grassroots approach is crucial for peasants to speak for themselves.

Strengthening of an emancipatory peasant identity which opens the possibility for alternatives and different ways of thinking, organizing, working and living. International collaboration and experience sharing are important contributions and motivations to promote agroecology in political and practical terms. A feminist approach fosters the involvement of women and of the issue of gender equality, which is crucial for agroecology.

The ÖBV as an organisation enables the mobilisation of resources for collective organisation. The diverse collaborations with allies and the cooperation with partners in different countries and regions multiplies the effects of this work.

The resistance against industrial agriculture and the growth-paradigm is highly connected with the motivation of alternative practices on the own farm and region. This leads to innovative and the permanent search for potentials of peasant autonomy and solidary economy in a context which is very often hostile to these approaches.

Limitations

Lack and scarcity of resources: time, financial, staff etc. limit the potential of the ideas and the work of ÖBV. Small farmers are often confronted with low incomes and market pressure which limits their possibilities. The relatively small number of members of the ÖBV is a limitation.

Due to the agricultural labour process, seasonal labour peaks and high work loads in general, as well as the necessary presence on the farm, farmers lack time and possibilities to leave the farm for political work.

Mountain farmers live in marginalized regions in peripheries. This limits their possibilities to get involved in highly accelerated political processes, to access resources and to connect to consumers and other networks. Especially for women there is also a lack of equality.
The political and economic context is not in favor of alternative paths of development. There is a high concentration of political power by the conservative “Bauernbund”, as well as up- and downstream the farms. This favors big farms and a focus on “growth” and “competitiveness” which lead to high rates of farm closures and a logic of “cheap food” at the cost of the majority of farmers. Non-transparent political processes and lack of information limit the active participation of farmers. A technocratic language in debates, bureaucracies and science creates further barriers.
Nyéléni Austria

Contact details:
Website: http://www.ernährungssouveränität.at/
Email: info@ernaehrungssouveraenitaet.at
Facebook: /ernaehrungssouveraenitaet

General Description

Nyéléni Austria is the Austrian part of the global Nyéléni-movement which was initiated in 2007 with the first global Nyéléni-Forum by La Via Campesina in Selingué, Mali (www.nyeleni.org). One main outcome of this forum (600 participants) was the Nyéléni-Declaration of 2007. Based on this declaration the movement initiated the first Nyéléni-Forum in Europe in 2011 in Krems, Austria (www.nyelenieurope.net) with a common declaration. A second forum followed in 2016 in Cluj, Romania. After the forum in Krems the Austrian movement organised in 2014 the first Austrian Nyéléni-Forum in Goldegg with 250 participants. The main objectives of this forum were: to strengthen and broaden the movement for food sovereignty in Austria, to create a common understanding what food sovereignty means, to build up a network and a platform for regional structures and for collaboration between them and to develop common action plans and strategies through which food sovereignty could be realised. Participants at the forum represented different constituencies from the food system: farmers, consumers, scientists, NGOs, activists, women, youth, trade unionists, artists etc.

Based on the declaration of 2007 and 2011 the forum was structured around five main pillars: Changing how food is produced and consumed, changing how food is distributed, valuing and improving work and social conditions in food and agriculture systems, reclaiming the right to our commons, changing public policies governing our food and agricultural systems. In all these pillars agroecology was a key concept. The participants discussed the main priorities and key questions in the different areas. This was the basis to translate this to the action plan and to the different existing projects: How can we realise food sovereignty in our contexts? The result was a report and the creation of regional Nyéléni-groups in Austria.

Since 2014 every half a year the movement organises an Austrian-wide meeting (one in spring, one in fall) in different regions in Austria to create a space of exchange and discussion and to mobilise continuously, as well as to build and strengthen alliances. Another contribution is a brochure on food sovereignty (45 pages, 15.000 pieces) which characterizes the movement and different perspectives.
Nyéléni Austria has no staff and is a loose network of different activists, but it is strongly supported by the ÖBV Via Campesina Austria, by FIAN Austria and by AgrarAttac.

**What we can learn**

Importance of creating spaces for exchange of ideas, development of strategies and organizing for change. Nyéléni as the social movement for food sovereignty is key for a transformation to agroecology. Nyéléni is a grassroot forum for the development and strengthening of a broad variety of projects, initiatives and ideas.

**Positive impacts**

- Discussion and strengthening of Ideas, projects and initiatives in all different areas of agroecology, connected with the common vision of food sovereignty. It helps in developing hybrid roles for key actors.

- Nyéléni is a space of popular and transformative education, collective knowledge production and exploring different ways of knowing, as well as farmer-to-farmer-knowledge sharing.

- As a social movement there is a common focus on the transformation of public policies and regulations to enable a transition to agroecological models. Discussion and common strategies are important to achieve this. It fosters the building of new community-led governance structures and of solidary economic structures.

- Nyéléni fosters a social movement culture of cooperation and sharing, as well as for the empowerment of marginalized groups and actors (e.g. peasants, women, youth etc.). Forging new alliances across disconnected domains and groups.

- Nyéléni is a way of mobilising people and resources to strengthen projects for agroecology and food sovereignty.

**Limitations**

- Lack of resources (financial, time and organisational capacity), sometimes high fluctuation of involved people (and thereby loss of know-how and knowledge). Nyéléni is highly dependent on the engagement of single activists.
Neoliberal regulations, policies and laws are a limitation for the movement and sometimes block the development of alternative projects.

There is no formal organisation behind Nyéléni. This means that it is sometimes difficult to connect to the movement. There is the constant need of support of organisations which are closely related to Nyéléni.

Nyéléni is very conscious of structures of injustice, inequality and oppression. Nyéléni wants to overcome these structures but they are a limitation.

Sometimes it's difficult to measure the impact of Nyéléni. If measurement is expected by others, this is sometimes a limitation. Measurement depends also on the indicators of success, which are often not in favor of agroecology and social movement perspectives.
General Description

The traineeship “Bodenpraktiker” (“Soil practitioner”) offered by the organic association Bio Austria is a 9-day course with blocs of one or two course days throughout the year. The focus of the course is to put again soil health to the center of (organic) agriculture and teach how to deal gentle with soil to create fertile soils. It covers various topics such as soil formation and structure, nutrient mobilization, cover crops, weed control and composting. The topics are covered in theory, but the traineeship also includes many practical experiences directly in the fields to deepen the understanding and make it easier to apply on the own farm. The course finally ends with a certificate. Since its beginning, more than 500 farmers have completed the training.

How is the traineeship done?
The training includes theoretical as well as practical lessens in the field. Therefore, it includes excursions to innovative organic farmers and different ways to put the theory directly in practice. The traineeship is held in cooperation with some other (organic) organizations and includes various different instructors. Besides the regional courses, the traineeships are also further split in different areas, like with specialization on vegetable production, for pasture lands or on arable farming.

Positive impacts
The traineeship teaches a wide range of agroecological practices but goes even further by putting a focus on the whole picture of reducing external inputs. Further, the course is very practical orientated making it easier for participants to apply the practices directly on their farm.

Limitations
The limitation of the traineeship is that it still depends on the willingness of the participants to apply the agroecological practices themselves on their farm, especially as some approaches may sound very radical to some farmers.

What we can learn
To lead to a transformation in the agricultural system, a change in mindset is needed which could be achieved through a wholistic approach rather than teaching separated lectures or practices on its own.
General Description

The research group “Agrar- und Regionalsoziologie” (“agriculture- and regional sociology”) is part of the institution on sociology at the public University of Innsbruck, Austria. The research group deals with encounter areas of the society with agriculture and with the field of rural development. This is mainly done through so-called Agro-Food Studies, which covers all areas from food production through consumption to even food waste. It includes topics such as the transformation of the food system or food politics, as these are often underline by social controls and shifts.

How is the research done?
The research group is collaborating with many different stakeholders that are affected or could be interested in the outcomes of the research. These can be farmers, politicians, producers, food processors, distributors and/or consumers. Thereby, the research is done in different ways depending on the context and includes participatory research with for example other farmers.
The research group also works together with other institutes and research groups. Specifically, in Austria this has some certain challenges, as it is often limited to work with other universities on the same project.

Type of outputs of the knowledge created
This includes scientific publications, conference talks and reports, lectures, books and public talks. One example is the collaboration on the scientific paper on “The economic potential of agroecology: Empirical evidence from Europe”, published in the Journal of Rural Studies in 2019. Another example is the collaboration with students on the project of “Essbare Stadt Innsbruck” (“Eatable City Innsbruck”).

Limitations
One limitation of the research group, which is often a general academic problem, is the necessity to publish frequently but at the same time work in one region. This can often be challenging to combine.

What we can learn
As the research group is not part of any organic or agroecological discipline, the group is very open within the research area. This leads to a wide range of topics covered but also the possibility to question and criticize different approaches or developments in various sectors.
3. Bibliography


4. Acknowledgement

A special thanks goes to all the key informants that offered their time and patience to explain me their picture of agroecology in Austria, gave me new insights in various related topics and hope and encouragement for a better future. This big thank you goes also to all the initiatives that provided me with information and details on them.
Belgium
1. Current state of agroecology in the country

1.1. Run-up

Research in organic farming in Belgium started in Wallonia in 1989 with a project funded by the regional government bringing together three research teams, the Laboratory of Grassland Ecology (Catholic University of Louvain), the Unit of Crop production of temperate regions (Gembloux Faculty of Agricultural Science, ULiège) and the Laboratory of Microbiology (Free University of Brussels). Then, two European research projects (CAMAR and AIR framework programmes) were coordinated by the Laboratory of Grassland Ecology (UCLouvain). The BIO-CAMAR project (1991-1993) studied the potential and the limits of systems and techniques of integrated and alternative agriculture. The ECOFARM (ECOlogical FARMing) project (1993-1997) was one of the very first agroecological research in Belgium that brought together pilot farmers and scientists in a participatory and holistic manner [1]. Between 2001 and 2004, the SAFE project, funded by the Federal Research Office, developed a framework for assessing sustainability levels in Belgian agricultural systems [2]. More publications on agroecology began to appear from 2012 onwards [3, 4]. Peeters & Wezel published in 2017 the agroecological principles and practices for grass-based farming systems, one of the very first papers on agroecological grassland management [5].

In 1992 and 1993, the Laboratory of Grassland Ecology (UCLouvain) designed the agricultural-environmental scheme of Wallonia. This turned out to be very useful for the further development of agroecological systems. In 2003, the first Belgian course on Agroecology was created at the Catholic University of Louvain.

The financial and food crisis of 2008/2009 catalysed the debate on alternative food systems [3, 6, 7]. Academics established an Interdisciplinary Research Group on Agroecology (GIRAF, 2009).

In 2011, a Field Liberation Movement against GM crops drew much attention and Olivier De Schutter’s ‘right to food’ speech before the UN Human Rights Council in the same year made agroecology known to a relatively large audience [6, 8]. The Day for the Peasant Struggle organised by the Peasant Agriculture Support Network (ReSAP) became a yearly event from 2014 onwards, and in 2016 Agroecology in Action acted as a platform for associations around the country. Agroecology Europe, a European association to promote agroecology, was
created in 2016 in Belgium by 19 founders from 10 countries. The film ‘Demain/Tomorrow’ (2015) has also given a boost to permaculture and agroecology as models for the future [9].

1.2. Current situation

As soils are in bad shape and more and more conventional farmers run into problems because of rising costs and falling incomes, agroecology as an alternative way of farming speaks to a growing group of farmers [10]. For the same reasons, some politicians, advisers and bankers are also becoming more interested in agroecology. For a growing group of young people without a farming background, agroecology as an alternative food system is an ideal to strive for and to develop practically [9].

1.3. Regional differences

Wallonia and Flanders differ a lot with regard to the adoption of organic farming and agroecology [8, 9, 11, 12]. Flanders has a very intensive industrial agriculture (pigs, poultry, vegetables, fruits, flowers), while in Wallonia arable crops, dairy and beef livestock are the dominant productions.

In Wallonia, peasant farming developed quite early with initiatives such as Coprosain. Quality labels were created with the Ardenne’s ham and Ardenne’s butter. These two first labels were followed by others. Production cost reduction has been soon recognized as a necessity by advisory services and farmers’ union. It has been notably applied by fodder self-sufficiency, fertilization reduction or integrated fruit production. The South-East hilly areas are mostly covered by grasslands and forests. Many farmers converted to organic farming in these areas.

In academia, agroecology is almost absent in Flanders; systemic pressure from the agro-industrial world seems to play a role [6, 7, 13]. A positive and recent development in Flanders is the Living Lab for Agroecology and Organic Farming at the governmental research institute ILVO, which may also stimulate academic researchers [12]. In Wallonia, agroecological research is far more developed [22].

Sector institutions and movements also differ in that Wallonia has many informal or marginally institutionalized networks (MAP, AiA, ResAP, …) alongside institutional actors (BioWallonie, FUGEA, …), while Flanders is on the whole more institutionalized (Wervel, Voedsel Anders, Bioforum) [5]. There are landscape related, economic and cultural differences behind these regional differences.
1.4. **Civil society**

Agroecology is unknown to most citizens; in contrast organic agriculture is well known, permaculture to some extent, especially in urban areas [11, 6, 10]. Citizens are becoming aware of the difficult situation farmers face, yet a rift exists between the citizenry and the peasantry [7]. Aspects of agroecology such as farming without pesticides, fair prices and local food circuits are gaining in recognition. Some consider agroecology a vague and little-known term and do not employ it in their daily work even while they strongly support its call for change [8, 14]. Some of them fear the term is not impactful enough and that this may be a real hindrance for the movement.

1.5. **Government**

Agroecology is to some extent recognized in all current regional political declarations (2019-2024). More short circuits, a new label for quality food that is produced in an environmentally friendly and equitable way, support for agroecological training as well as a subsidy for fodder grass figure in the Walloon declaration. The aim is to have 30% organic agriculture, in terms of area, in 2030. Support for agroecological urban farming, including a scientific reference centre and a seedbank figures in the Brussels declaration. Brussels has a Good Food strategy, aiming at 30% of fruits and vegetables for the Brussels’ population produced by local urban farms by the year 2035. Other cities in Belgium are working on food strategies as well. In the Flemish declaration the emphasis is on strengthening the agrobusiness complex, giving little hope for agroecology. On the other hand, it is also stated that the Flemish agricultural investment fund (VLIF) will be oriented towards innovative, climate and environmentally friendly agriculture, including organic agriculture and agroecology.

1.6. **Challenges**

In Belgium, like in other countries, the number of farms is decreasing rapidly (some 40 farms per week) while the development of agroecology is hindered by the systemic nature of barriers [6, 7, 9, 10, 11, 12, 13, 15]: access to land, access to loans during the transition period, externalization of ecological and social costs, hence unfair prices and farmer incomes, lack of agroecology in curricula in middle and higher education [17]; incompatible regulations and the lobby of the agro-industrial world.

Even while agroecological farming appears to be more profitable than conventional agriculture on the long term [16], farmers who want to convert to agroecology face difficult first years. They have to make new investments, while soil restoration and adaptation of crop practices take time and new markets have to be developed [15]. As agroecology questions the food system as a whole, it faces resistance from powerful actors in the agri-food business and politics who want to maintain the status quo [7, 8, 12, 13].
1.7. Further considerations on farmers’ condition

There is an urgency of saving a maximum of small farms, which may otherwise be lost from family farming and cooperatives [10]. From a farmers’ perspective, dignity and a decent income are priorities and practices need to change at their pace. The spread of short circuits is crucially important [7, 10, 15]. Over time, conventional agriculture will hopefully become something of the past, agroecology being the new paradigm. Farmers need to be accompanied by researchers and others, and citizens will have to become much more aware of how food is grown [7, 10]. Pioneer farmers who innovate in agroecology e.g. with local cultivars and breeds or in grass-based livestock systems need to be put in the limelight [11]. A big challenge is agroecology in middle and higher education, but there are signs of change [6]. There are chances within the context of the EU to make the link between agroecology and climate (carbon sequestration in soil) more visible [11].

1.8. Social Movements

Social movement umbrellas such as Voedsel Anders (27 member organisations), Agroecology in Action (46 member-organisations) and many smaller and informal associations are all striving for an alternative food system, i.e. agroecology. Gender equity is not an explicit goal of most associations, the emphasis is more on peasant charters (e.g. MAP, 2018), food sovereignty, food solidarity, access to land, fodder autonomy, regenerative agriculture, permaculture and short circuits. Campaigns, such as the Wervel campaign for local, ecological and fair food often take a stance on the food system as a whole, also at the international level. Both in Flanders and in Wallonia, there are organisations which help new farmers get access to land (de Landgenoten and Terre-en-Vue respectively).

1.9. Agroecological Practices

Agroecology in Action has inventoried more than 250 agroecological initiatives in Belgium as a whole. These include collective vegetable gardens, food belts around cities, farms in transition, short circuits, social groceries, farmers’ markets, CSAs etc. A few trends can be mentioned [6]: farmers striving for fodder autonomy, thereby reviving the mixed farm model, new peasants without a background in agriculture venturing into market gardening [18], reduced tillage arable agriculture under the name of regenerative or conservation agriculture [19] and a rising number of organic farms. Most of these trends are more conspicuous in Wallonia than in Flanders and the Brussels region, though neo-peasants venturing into market gardening or mixed micro-farms is a clear trend in the whole country. As an example, over the last six years 70 new market gardens were started in the so-called Food Belt of Liège (Ceinture Alimentaire de Liège, CATL) [8]. In Brussels, the number of urban farming projects doubled to 32 between 2015 and 2018 [20].
1.10. Alternative markets, short chains, quality control

Both in Flanders (csa-netwerk.be) and Wallonia (gasap.be), there are associations which unite initiatives working along the lines of Community Supported Agriculture. CSA models are somewhat different in Flanders and Wallonia. The Flemish CSA movement started 15 years ago (see 3.1.1). There are now 40 CSAs in the Flemish network, many of which appear to be economically sustainable thanks to their size. In Wallonia, the vegetable farms are generally smaller and face huge challenges in terms of economic sustainability [18].

On short chains and local food, there is much dynamism as well. In Wallonia, the new umbrella association 5C (Collective of Citizen Short Circuit Cooperatives, collectif5c.be) has already 21 members. Farmers markets are well known throughout the country. A long standing PGS initiative is Nature & Progrès (a French association also present in Belgium), other PGSs are under development (Les Grosses Légumes, voedselteams.be, Le Début des Haricots).

2. Initiatives in the country

BoerEnCompagnie

Contact details:
- Phone: +32 477300965/489050202/473705177
- Website: http://www.boerencompagnie.be/
- Email: info@boerencompagnie.be
- Facebook: /boerencompagnie/
- Instagram: /boerencompagnie/

General description

Region: BoerEnCompagnie is a farm just outside the city of Leuven, in Flanders, Belgium.

Actors: Farmers, harvesters, city of Leuven

Topics: CSA, vegetables, dairy, meat, bread, short circuits, fodder autonomy, green manure, renewable energy, regenerative agriculture

Story: The story of BoerEnCompagnie started 15 years ago with the first CSA in Belgium. One CSA farm with vegetables became three. When the city of Leuven launched an open competition for the fields surrounding a nearby abbey, the vegetable farms joined forces and submitted the idea of an ‘autonomous mixed organic farm’. The city approved of it and they started a mixed farm with vegetables, dairy and meat and a lot of plans for the future (bread, chickens, ...).
**Objectives:** Ecological, social and economic dimensions are tightly interwoven at the farm. BoerEnCompagnie strives after a fair income for farmers and artisanal processors. Within the limits of the planet, in the form of small-scale family farming, on the basis of CSA principles. The aim is to (i) create, together with citizens and colleagues, a dynamic and local food system, (ii) give food the prominent place it deserves, (iii) build a foundation for a fair and sound society, (iv) co-create a community in which people can develop themselves in a cooperative context, and (v) be farmers with a common sense!

**What can we learn?**
Given a certain dynamism of farmers and the surrounding community, farms can evolve in an organic way at a rather fast pace. Rome wasn’t built on a day, neither can farms immediately be agroecological or autonomous on all fronts. Agroecology needs a sustained effort from farmers and the surrounding community.

**Positive impacts**

An important reason to set up a mixed farm is to close cycles. The whey which comes with cheesemaking is very good food for the pigs. Vegetable waste also goes to the pigs. The bran of the grain goes to both pigs and cows. The pigs and cows produce manure which fertilizes the soil where crops are grown. Electricity comes from a renewable energy cooperative of citizens, which produces wind and solar power.

The farmers see their job in terms of providing a service: producing organic, healthy food. The daily work revolves around caring for animals, plants and people. Food is wrongly considered an industrial product. Factories can stop manufacturing cars, but farmers cannot stop growing food! Farming is a service and a social activity.

The CSA model allows a community to support itself by producing healthy food. Reciprocity is a very important principle. Consumers change into active participants. They share the risks of the harvest with farmers, so that farmers can have a decent, guaranteed income. There is also a solidarity principle at work: oogsters (harvesters) can choose to pay less or more for vegetables depending on their income. There is a maximum, an average and a minimum price, which, together, the participants have to respect. As long as the planned turnover is delivered, the farm can operate another year. The idea is that harvesters support the farm for a whole year by paying their yearly share in the total costs, including the wages for the farmers.

Education is an important aspect of the work. The farm receives between 160 to 200 school classes a year, with support from the city of Leuven. In terms of professional education, the Flemish organic agriculture school Landwijzer will make use of the farm to teach their students about farming practice, from 2021 onwards. The farm also receives trainees, both Belgian and international students.
AGROECOLOGY INITIATIVES IN BELGIUM

Challenges

There is a strong motivation to further enhance soil fertility and biodiversity, but there is at present too much work for too few farmers. The farm meets the requirements for organic farming very well but wants to go further on the path of agroecology. How to develop an ecological infrastructure for protecting cultures like carrots and cabbage? At present the natural enemies of pests are not sufficiently supported in terms of ecosystem requirements. There are green manure crops in the rotation, but this is not enough. The aim is to commit to regenerative agriculture on the longer term. The label for organic agriculture should evolve in this direction too.

Policies of the Flemish government poorly support agroecological developments. There is still too little ambition in Flanders to go on a path towards sustainable agriculture, let alone agroecology. So, communities need to take things into their own hands and let the change come from below.

The farmers receive a decent income and there is a solidarity principle at work for the community as well. But the farm income does not allow for a pension scheme. This is a real problem as the farmers also do not own the farm, so they cannot sell it upon retirement. Also, the heavy workload does not allow the farmers to study, try out new things or visit other farms. And the room for reinvestment, to buy equipment to do the work more efficiently, is at present too low. Financing a retirement plan for the farmers and better logistics, e.g. farm buildings are a priority.
General description

Region: ‘L’Alternative Agroécologique’ (‘The Agroecological Alternative’) is a cooperation project between the private research center RHEA and eight farms, of which six are in Belgium, both in Wallonia and Flanders. The other two farms are in France and Romania.

Actors: RHEA (natural Resources, Human Environment and Agronomy), the Living Soil Academy, family farms, farm workers, landowners, contractors, micro-farms, cooperatives, university students, researchers, Farmers’ Unions, NGOs.

Topics: Agroecology, Regenerative Agriculture, Organic farming, reduced tillage, soil fertility restoration, soil life enhancement, crop/livestock integration, fodder autonomy, forage grass/legume mixtures, rotational grazing, extended grazing period, livestock outwintering platforms, rustic animal breeds, animal health and welfare, system simplification, cover crops, complex mixtures of green manure, composting, mulching, compost tea, rustic crop cultivars, ecological network, natural pest control, flower strips, herbaceous strips, melliferous hedges, carbon sequestration, biodiversity restoration, holistic and participatory approach, agroecological training, economic strategy, cost reduction, product processing, short and local marketing chains.

Story: The Agroecological Alternative started in 2013 with developing an alternative farming system in one single one hundred-hectare farm. The challenge was then to design and implement an organic reduced tillage system (‘organic conservation agriculture’). At that time, it was generally assumed that without herbicides and ploughing it was impossible to control weeds. Another challenge was to develop a full outdoor grass-based livestock system with an extended grazing period. In both cases the workload had to be reduced. These challenges and some others were met by discussing with innovative farmers, by searching on the web and thanks to the field experience accumulated in a long career.

Objectives: The Agroecological Alternative aims at organizing collectively, and in a participatory way, the transition towards an agroecological food system. It is based on a holistic approach, with consistent ecological, economic and social strategies.

What we can learn?
There is a future for family farms and cooperative farming. The conventional system is collapsing, but there is an alternative that works! The way forward is not automated precision agriculture carried out by robots, which is an extension of current industrialized agriculture.
The only viable alternative is agroecology, a system based on people and biodiversity that can create new jobs in the agro-food sector. We need farmers for producing quality food and for managing biodiversity and landscape, and we need to support farmers in the transition. These are the main lessons for Farmers Unions, civil servants, decision makers. Escaping from the system is possible! It is just a question of imagination.

**Positive impacts**

The farms are all organic and reduced tillage (no ploughing), hence soil life is restored and biodiversity recovers. As soils are no longer disturbed, soil organic matter content also increases, hence the amount of carbon sequestered in the soil. Important for both biodiversity and pest control is also the ecological network. In the cultivated plots, there are flower and grass strips every 60 meters. There are also hedges with a high diversity of melliferous trees and shrubs. Ecological network of strips and hedges covers 6 up to 10% of the farm acreage. Animal health on the farms is also an important aspect. Livestock is allowed to graze as long as possible, around 9 months a year. They can overwinter on woodchip platforms and are only fed grass silage and hay. Calving is close to natural conditions, in grassland in April and May.

Since no pesticides are used on the farms and plants and animals thrive, human health also benefits. The farms with cattle produce high quality meat, the market gardens grow nutritious vegetables and fruits, bread wheat and spelt are low in gluten and nutrient rich.

Continuous progress is made thanks to the holistic and participatory approach. RHEA discusses and adapts the system together with farmers, workers, or contractors. University students can do their thesis on the farms.

The Living Soil Academy (Académie des Sols Vivants) organizes on-farm trainings and visits to agroecological farms abroad. Farmers benefit from the exchanges and trainings.

There is a very efficient economic strategy which is about reducing costs and increasing income. It consists in: (i) Dramatically reducing conventional inputs; (ii) Making biodiversity working for farmers; (iii) Producing quality products; (iv) Selling these products locally in short marketing chains.

**Challenges**

A major challenge is to train young people to spread the system for accompanying a large number of farmers in the transition towards agroecology. People need to be trained in the horizontal participatory approach and in the technical aspects of the system. It is a new system, hence there are currently not enough people who can help farmers making the transition.
It is particularly challenging to organise a collective project for making the transition towards agroecology in a participatory way. Farmers Union and other stakeholders should be part of such a project on the regional scale. Supports from the regional government and private companies are needed to make it happen.

The challenge of cooperation is also a challenge of governance. Involving a much larger number of people, which is the aim, has consequences. A kind of network governance is needed. Currently steps are being made to involve more agro-food companies, like mills and breweries.
General description

Region: Flanders, Belgium

Actors: Farmers, land workers, co-producers.

Topics: Peasant agriculture, fairness, autonomy, solidarity, agroecology, right to food, food sovereignty, tenancy, ecological farming, climate adaptive farming, nutritional value, food vouchers

Story: Boerenforum is a grassroots movement which stands for a peasant agriculture that is fair, autonomous, solidarity based and agroecological. It is a member of La Via Campesina and arose out of the farmers network of Voedselteams (Food Teams) some seven years ago. Each year several one-day forums are organised around a theme. Recurrent themes are tenancy, fair prices and ecological farming. On the forum days, farmers and landworkers inform and inspire each other. Shared opinions and positions are taken to inform the public and to motivate partners for the collective struggle for change.

Objectives: Autonomy, food sovereignty and agroecology are the goals of Boerenforum. Family farms, cooperatives and associations together produce local, healthy food that is characteristic of the region. On-farm processing of food, energy production, seed selection, partnerships, care related activities and green recreation create added value. Agroecological peasant agriculture applies ecological principles in agriculture. It involves cares for people, animals and the soil. Skills and knowledge are transferred from generation to generation and further developed, by embracing openness, creativity and diversity. Food chain autonomy is an important striving, through regulated markets, fair prices and fair contract work. Boerenforum builds alliances with movements working for social change based on democracy and self-determination, in order to bring about a worldwide paradigmshift.

What can we learn?

Peasant agriculture in Flanders is alive and kicking! Cooperation, mutual solidarity and exchange between peasant farmers across sectors and labels creates a strong, grounded movement for change.
Positive impacts

The farmers of Boerenforum invest a lot of time and energy in creating their very own farms, also in terms of animal breeds, plant seeds and soils. They work with dual purpose cows or chicken for instance, but do not buy the breeds. They instead crossbreed and select their own dual-purpose cows or chickens. There are also farms which grow and select ancient wheat cereals. All this contributes to the restoration of agrobiodiversity and to heritage conservation. Biodiversity is also restored through the planting of shrubs and trees on farms, which is at the same time a climate adaptive measure: more trees and shrubs on the fields means more water storage in times of drought.

For Boerenforum the value of food, including its nutritional value, is fundamental. Nutritional value instead of monetary value should form the basis of the food economy and how food reaches citizens. There is a right to good food. A radical idea in this vein would be to give food vouchers to citizens, which they can spend to procure local, healthy food.

In the network, peasant farmers cooperate across labels and sectors. The farming sector in Flanders is a very specialised one, with different networks for dairy and meat for instance. The diversity of farms in the Boerenforum network is exceptional. There is striving to close cycles both within farms and through cooperation between farms, and also to create food cooperatives across sectors, with real participation of the members. The network also seeks political allies in unions, such as the ABVV socialist labour union.

Challenges

In Flanders the largest Farmers Union, Boerenbond, is very powerful. It constitutes an important obstacle for change, since the union and its allies make agroecological farming look unsustainable in economic terms. But the calculations would look quite different if nutritional value was taken into account, as well as care for the environment. To convince politicians, sector organisations, advisors and research actors of a sounder perspective, movements like Boerenforum are facing an uphill struggle however.

Fair prices, fair contract work and a local economy based on solidarity are important objectives of the network. They cooperate with civil society associations and movements like Wervel and Voedsel Anders and try to convince these organizations to work more closely with the farmers to realize the change. A lot of policy work is done by these movements, but as the change apparently needs to come from below, working with farmers is very important.

Citizens have lost their way to the farmers, but for farmers it is also hard to find the citizens! Logistics is a real challenge, to which Boerenforum will pay attention at their next meeting. Local cooperatives could be a model which works.
General description

**Region:** Belgium

**Actors:** Food producers, associations, unions, mutuals, researchers, citizens

**Topics:** Too many to list …

**Story:** Agroecology in Action came into being in Brussels on December 9 and 10, 2016 by bringing people and organizations together on the national level. Participating organisations with different points of view on agroecology forged a collective text. More than 700 people showed their interest and during the weekend itself some 400 to 600 people came to participate. Capitalizing on the momentum, some of the participating organizations decided to create Agroecology in Action as a real movement and a real organization. Since 2016, AiA has organized another forum on the national level, co-organized decentral forums in Wallonia and has been invited for its expertise.

**Objectives:** Agroecology in Action unites organizations, peasants, farmers, citizen collectives, researchers, cooperatives, environmental activists, SMEs, health actors, solidarity actors and mutuals who aim to bring together, support and multiply agroecological and food solidarity projects in Belgium. Agroecology, solidarity and food sovereignty are the pillars on which AiA rests.

**What can we learn?**

Horizontal, informal initiatives can create a lot of dynamics, also at the national level. In the case of AiA, two consecutive days in 2016 devoted to agroecology as an alternative food system brought together a large number of people, with diverse backgrounds and roles in the movement. At the same time, broadening the base of the movement is an ongoing point of attention.

**Positive impacts**

Nature and biodiversity are very much on the agenda, both in AiA’s conception of agroecology and through its allies. AiA has prominent nature protection and environmental organisations among its members, e.g. Natagora, Inter-Environnement Wallon, Faune & Biotope, Greenpeace. Bridging the gap between nature organisations and farmers is an important aim.
Access to healthy food for everybody is one of the prominent objectives of AiA. Two mutuals are a member of AiA: Christelijke Mutualiteit and Solidaris. This membership is very significant for broadening the base of the movement.

AiA makes strong demands vis-à-vis politicians and authorities. A Political Memorandum for the Municipal Elections of 2018 detailed five major demands: 1. Democratic governance of local food systems 2. Protection of agricultural land and natural resources 3. Support for new peasants and the agroecological transition 4. Promoting territorially anchored consumption 5. Guaranteeing the right to healthy food and strengthening solidarity mechanisms. Also for the regional elections in 2019 a list of demands was detailed, including a position on the future CAP.

AiA unites disparate actors in the struggle for healthy food and food solidarity and against precarity. Food justice, notably the tension between fair farmer remuneration and access to healthy, fresh, seasonal food for everybody is an explicit point of attention and debate.

Horizontal, participative decisionmaking is at the heart of the AiA movement. The major event in December 2016 was organized in a horizontal way. To this end the informal network ReSAP (Support Network for a Peasant Agriculture) mobilized civil society actors and volunteers. Internal governance has been an explicit point of reflection in 2019, decentralization and a stronger implication of members in activities being goals of the movement.

Challenges

There is a need for strategic reflection on organic agriculture (Agriculture Biologique, AB) as a prototype for agroecology. Furthermore, agroecology can be strategically positioned as a counterweight to the industrialisation of organic agriculture.

Though AiA has a broad base, there is a concern that conventional farmers interested in agroecology may not take part in the movement. The rift between these farmers and the more militant agroecology activists, who are in the majority in the movement, needs to be addressed. AiA needs a strong base in the rural areas, the agricultural expertise of family farms is crucially important.

The relationship between the French and the Dutch speaking part of the movement needs to be worked on to be effective at the federal level. Currently most activity takes place in Brussels and interaction is mostly in French.

Note: references for this case-description: [23, 24].
General description

Program or traineeship title: École Paysanne Indépendante

Status: NGO

Type of program: theoretical reflection and farmer-to-farmer traineeship and courses

Starting year: each year a programme of (recurrent) courses

Duration: theoretical courses of one or a few days, traineeship in farm for a season (1 or 2 days a week)

Topics: Theoretical courses for (future) farmers, employees of MAP and its partners: history of agriculture, the question of productivism, agricultural syndicalism, family farms and cooperatives, the project of the peasant movement, socio-cultural activities, communication, organisation and responsibility in the movement. Practical courses for farmers: farming techniques, management skills, market gardening, aromatic plants, fruit production, livestock farming, distribution, commercialisation, entrepreneurial skills, digital skills, social media, PGS, support for new entrants, short circuits, juridical aspects.

Objectives: to popularise practices of peasant agriculture which respect the environment, economise on external inputs and fossil energy, generate jobs in agriculture and the rural areas and are open to citizens and to innovations.

How is the traineeship done?
The traineeship takes place on small family farms which produce sound food with a minimum of external inputs and mechanization. They respect the soil, nature, farmers and consumer-
AGROECOLOGY INITIATIVES IN BELGIUM

actors. Biodiversity is not just preserved; the aim is also to enhance it. Most of the food is sold in short circuits.

**What we can learn?**
The courses cover the different aspects of peasant farming, both practical and theoretical: production (horticulture, animal husbandry, arboriculture), autonomy, processing and commercialization, but also communication and how to pass on the knowledge.

**Positive impacts**
Through the traineeship small producers such as family farms and collective projects are able to establish themselves. It also stimulates producers and consumers to reflect on and change their ways of working and consuming.

**Challenges**
There are many barriers to the establishment of multiple small agro-ecological farms. The recognition of agroecology is also a challenge, as is the status of the peasant farmer in society.
AGROECOLOGY INITIATIVES IN BELGIUM

GIRAF
Belgian Interdisciplinary Agroecology Research
Group of the FNRS

Contact details:
Website http://www.agroecologie.be/
Facebook: /GiraFNRS/

General description
GIRAF is a contact group of the Belgian Scientific Research Foundation (FNRS) composed of scientists with various backgrounds, founded in 2009. The group organizes an open research day each year. Some of its members took the initiative of creating the first Belgian interdisciplinary interuniversity training curriculum in agroecology. The first edition took the form of a highly successful certificate in agroecology and transitioning to sustainable food systems (http://www.certificat-agroecologie.ulg.ac.be/), launched in October 2013. GIRAF also instigated the International Summer School in Agroecology or ISSAE.

Institution status: members and associates of different universities and research centres

Topics: broad range of topics in agroecology

Objectives: This group has set itself the task of fuelling and sharing thinking about agroecology on the basis of interactions among different scientific disciplines and actors.

How is the research done?
This group’s members draft joint position papers and set up scientific meetings (Belgian Agroecology Meetings) to discuss agroecology. Some activities (certificate, summer school, various networks, and conferences) arise within GIRAF but are conducted by individual members or institutions. Not only is science the cement and defining element of this interdisciplinary contact group. GIRAF is also mobilized by the challenge of cutting across disciplinary lines. GIRAF’s members are thus federated by their vision of a strong and committed version of agroecology. They want to contribute to thinking about and for agroecology in society as a whole. The group favours the construction of participatory research frameworks, which allow for action-oriented research while guaranteeing its scientific validity. It values the diversity of forms of knowledge.

What we can learn?
As an interdisciplinary scientific approach, agroecology has a critical role: It challenges the industrial food system as well as the dominant agricultural model based on the intensive use of inputs that are external to the agroecosystem. As a social movement, agroecology criticises the effects of the modernization of the world’s farming system and explores another pathway based above all on the search for independent decision-making and the sparing use of resources.

Type of outputs
Scientific papers, articles and reports, books, meetings, action-research, debate…

Note: This case-description is based on information available on the website of the initiative
3. Bibliography


[6] Interview S1

[7] Interview S2

[8] Interview M3

[9] Interview M2

[10] Interview P2

[11] Interview M1

[12] Interview P3

[13] Interview P4

[14] Interview P5

[15] Interview P1


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Croatia
Agroecology initiatives in Croatia
Karla Škorjanc

1. Current state of agroecology in the country

The term ‘agroecology’ does exist in the Croatian lexis, but in most cases it is not used to denote the contemporary meaning of the word.\(^1\) It appears primarily in the academic realm as the older, more narrow concept concerning the ecology of the agricultural systems (i.e. ‘agro-ecology’).\(^2\) The agricultural extension service had a department called “Agroekologija” (it was shut down the previous year), but here it was actually a translation of ‘agro-environmental’ – and the department was mostly dealing with IPM (“integrated pest management”). Agroecology is offered as a BSc and MSc course at the University of Zagreb. The study program states that the course is designed to transfer knowledge on possibilities and practical ways of sustainable management of agriculture in Croatia, while in the actual course list there are but a few courses that go beyond the narrower concept of agro-ecology\(^3\), which exemplifies how the vagueness of the term might enable misuse.

The only places where the word agroecology with its newer facets can be found, to some degree, are a few non-governmental organisations that include it as a part of their agenda. Even though the Croatian citizens, decision-makers or scientists may not be familiar with the agroecological movement, practices or science (!), there are other related (sub-)concepts that have seen an increase in popularity in the last few years. First and foremost is organic agriculture. Less than seven years have passed since Croatia joined the European Union, and the subsidies schemes made a big impact on how land in Croatia is managed. There is, however, a large discrepancy between the proclaimed success of reaching 7% of organic growers in just a few years (in 2007 it was a mere 0.7%)\(^4\) and what is happening in the fields (more on the topic in chapter 1.2). The demand for organic products is growing and at the moment there is not enough local produce (primarily raw but also processed) to satisfy the market. The current level of food sovereignty is very low (especially considering the favourable agro-climatic conditions for a year-long and diversified production). The decision-makers persistently fail to put this perspective on the agenda. The incentives to make Croatian farmers more competitive in the European market are always the top priority – but they do not work either.\(^5\)

Differences between regions in Croatia exist on many levels. Even though Croatia is a very small country, a great variety of geographical diversity, biodiversity, influences of historical forces, and the still recent war had very distinct effects on different regions. The same follows for agriculture and agroecological capacities. What is important to note is that the regional peculiarities are not in any way the fruit of intentional efforts for developing agroecology. There are a lot of initiatives in the Zagreb area due to the heavy centralization - most of the Croatian population lives in and around the capital. Unlike the Slavonia region, where most producers are but the purchasing power is low, Zagreb receives most of the higher-quality
food from all around the country, which illustrates the structural inequalities that are amalgamated with the distribution of the population. The Zagreb county probably gathers most of what some call “romantic farmers”, attempts of former urban dwellers for self-sustained organic practices.

The Istria region (bordering with Slovenia and Italy) was also often mentioned by some key informants in the category of more agroecological regions. There are a couple of CSAs operating and a fairly large percentage of organic producers, but most are olive oil and wine producers that produce predominantly for tourists or export to the neighbouring markets. In Međimurje there is a somewhat larger number of small organic and biodynamic family farms, to an extent connected to the fact that Rudolf Steiner (the founder of biodynamics) was born there, and that some pioneering associations like “Duga” and more recently the Rudolf Steiner Center, work persistently on promoting biodynamic agriculture.

There is a noticeable contrast between the north and the south – even though our southern coast and islands are full of amazing examples of ‘High Nature Value’ farming (ancient extensive orchards and low-impact grazing systems); a lot of agriculture gave way to “touristification”, leading to abandonment or repurposing of agricultural lands. The good news is that there are some incipient examples of sustainable agro-tourism and a (still) shy but growing movement of permaculture and local food initiatives.

The causes of our limitations could be attributed to two main sources: 1) “Them” – the inadequate public policies and inefficient bureaucratic system; and 2) “Us” – the inability of farmers to solve their problems through cooperation and association. There are only around 500 agricultural cooperatives with around 8000 participants in Croatia. They are often short-lived, especially when bigger sums of money come into play. Croatian bureaucracy is notorious for the extensive amounts of paperwork necessary for every and the smallest of procedures (we’re officially among the worst in the EU) and for its slowness. Agriculture and environment are still not seen as priorities, and there is not sufficient pressure to have continuity in these crucial sectors.

1.1. Social movements

The agroecological movement in Croatia is still not very coherent or large. A curious feature of our scene is that there has always been some association of non-producers, urban folks interested in higher quality products, alternative lifestyles and protection of commons, but never a large scale movement coming from the farmers, be it conventional or organic. Assigning this solely to the lesser level of education and higher conservativism of the rural population would conceal the real culprits: firstly, the lack of social capital (trust and cooperation) – which is a consequence of the burdensome inheritance of socialism and the corrupted transition to capitalism that followed; and secondly the framework in which the farmers operate, which is a “semi-feudal system”, as one of the informants puts it, yet another consequence of the flawed transition. The resources (e.g. land, subsidies) are allocated according to political affiliation or family ties, forcing some farmers to work extremely hard to survive, and a lack of time to organize a serious movement.

There are some NGOs and groups of individuals working on topics such as the preservation of local seeds and breeds, urban gardening, permaculture, biodynamic agriculture, and some transition initiatives and CSAs, but their reach remains mostly within local and “smaller” issues.
The issue of seed production and preservation, as the basis of food sovereignty, has been recently coming under the spotlight, and it is important to highlight it here as well. Only 7 out of 27 conservation varieties listed in the national catalogue of varieties were produced in Croatia in 2018\(^8\) and 100% of organic seeds came from abroad\(^9\)(!). Even though ‘varieties developed for growing under particular conditions’ (the so-called “amateur seed”)\(^10\) have been a part of Croatian legislation since 2013\(^11\), we do not yet have anyone brave enough to register for growing them because their definition and marketing regulations are more restrictive than in other European countries. This is why associations such as the Croatian Federation of Organic Farmers Associations (\textit{Hrvatski savez udruga ekoloških proizvođača} - HSEP) have been actively lobbying for a change in regulations and publishing educational materials that would motivate farmers to start producing seed. Some associations (e.g. “Rustica”, “Ospera”, “Duga”, “Biovrt”, “ZMAG”) created community seed banks as a means of resistance and protection of the heirloom seed.

For some it seems that the movement is weaker than it was some years ago when organisations such as “\textit{Naša zemlja}” (“Our land/soil”), “Ecologica” and “Rustica” did pioneering work in gathering ecological producers, organizing educational activities, seed exchanges, and lobbying. Things are changing, but quite slowly. One thing is certain - a lot has been done concerning raising awareness: “Nowadays nobody ridicules organic agriculture anymore. Well, at least not openly.”

\subsection*{1.2. Agroecological practices}

Even though the number of surfaces under organic management have grown significantly in the past years, that does not reflect the actual management of the agricultural fields. For the majority of the farmers, the primary motivation for transition is the subsidies. An interesting phenomenon is born from this - the so-called “\textit{parallel production}” - many farmers that have organic fields still have larger surfaces under conventional management, which could mean that they either do not have faith in the stability and productivity of their organic crops or that they use the non-organic management for both of their production systems. The average size of organic farms is twice as big as the average conventional farms and they are often monocultures – so, even if they are organic they are “conventional-organic” and not agroecological. This is principally a consequence of the “\textit{big run}”, the government’s action plan to enlarge surfaces under organic management, which was backed with large subsidies for new organic farmers. That is why we now have thousands of hectares of hazelnut and walnut orchards in which the grass is higher than the trees and hectares upon hectares of pastures with just a few sheep.

Many (or most) Croatian farmers burn crop residues or till them into the soil, and composting is a rare practice. The soil tillage practices are still predominantly conventional; according to the 2016 National Bureau of Statistics data, from 134459 arable farms, there were only 2937 that adopted conservation tillage and merely 1862 no-till farms.\(^\text{12}\) Thanks to the efforts of the extension service, cover crops can be seen in the fields much more often than before, especially for green manure. Intercropping is extremely rare (and the CAP further discourages it because it creates too much administration for the inspectors), while mulching is starting to be more used, but it is still an exception rather than the rule. Crop rotations are used, but if the farm is not under organic management, they are rather messy, and go by the principle of “every few years we put something else”. Deliberate implementation of insectary flowers,
1.3. Alternative market and local product distribution channels

There are two forms of CSA groups in Croatia: GSR – Grupe solidarne razmjene (Groups of Solidary Exchange) and SEK – Solidarne eko grupe (Solidary Organic Groups). In the SEKs the farmers involved have to be certified organic, while the GSRs are more based on trust and within-group controls. They have been present in Croatia for ten years now. They are most similar to the Italian Gruppo d’Acquisto Solidale model (groups of people ordering food and other products from sustainable producers), usually with low to null participation of customers in the works of the farm and with no paying in advance. It is hard to count how many there are exactly, because some groups are very small and/or do not operate continuously, but it is approximately somewhere between 13-19, so it is still not a large movement. Nevertheless, there is pride in how the number is getting bigger every year, especially considering that there are now around 1000 families eating good food and supporting their local farmers.

As was indicated already in the introduction and in paragraph 1.1, one of the biggest hindering factors for agriculture in Croatia is the lack of cooperation between farmers. This also applies to marketing. The initiative to start a CSA almost always comes from consumers, rarely from the producers, probably because the farmers are still not familiar with such options or do not consider it could work. After a CSA is established, farmers in it seldom associate to reduce their costs. This forces CSA groups to partly operate in a grey zone since the slaughtering facilities or transportable cold storage required by the law are too expensive for individual farmers, so the farmers accepted to the CSA often lack them, and this is especially problematic when selling in parking lots and other spaces. An organizer of a CSA remarked in an interview: “I don’t like to talk about it so that it wouldn’t become more complicated”. The groups sometimes opt for more hidden pick-up locations to avoid possible repercussions. Some decided to deal with this precarious situation in a different way: CSAs are organized in the spaces of farmers’ market, or slowly re-organize as organic-only farmer’s markets without intermediaries. These work rather well, especially when backed by the local government in the form of free access to the local farmer’s market or other common spaces, such as the case, for example, in Osijek.

2. Initiative analysis

In the following section, we analyse 6 examples of leading agroecological initiatives that can be found in the fields of practice, movement and science. The distinction between practice and movement within our case study is rather fluid. Therefore, some of the initiatives that were listed as practice might as well qualify as movements.
General description

“Zogeterra” is an agroecological family farm with a long history. It is spreads around 1,7 ha of land on Brač island (in the Dalmatia region). Its current steward is Ms. Vesna Rožić, who came back to her grandfather’s land after a career in tourism, followed by living and working for some time in the USA. The farm was registered under her name in 2009.

Ms. Rožić decided to work with everything that she encountered in the land: old varieties of figs, almonds, sour cherries, olives, and herbs. She strives to close the nutrient and water cycles in her farm, hence chickens and geese are kept for manure (but they don’t get eaten), rainwater is collected, everything is mulched, and she makes compost and sometimes applies compost teas. She processes most of the raw material and produces teas, spices, syrups, salts, jams, creams, soaps and macerates. All the products are made following traditional recipes. She designed the packaging so that it is almost completely recyclable or biodegradable, and the labels are printed on recycled paper. Ms. Rožić works only with a few trusted small shops and CSA groups, and sells most of her products at the farm gate. She says that the demand for her products is huge and it sells very easily. Ms. Rožić is also a seed-keeper of a traditional tomato variety (‘brački jabučar’) and looks after a small seed bank with more than 20 other landraces, the seedlings of which she sells locally.

Moreover, she organizes educational and spiritual workshops on her farm. She advocates and lobbies for food sovereignty on the local and national level as the president of the Association of Organic Farmers of Brač Island and as the board member of the Association of Organic Farmers of Dalmatia, and of the Croatian Federation of Organic Farmers Associations, where she is a member of the team for Food Sovereignty and Seed Production.

Throughout the years she has learned not to overstep her limits, so she believes now is the time for a new generation to take over. She is very open to provide assistance and resources.
to anyone interested and serious enough to come and work a piece of her land in exchange for a part of their yield.

What we can learn?

Ms. Rožić says one of her important missions is to show that in Croatia one can live from agriculture and be satisfied. In Croatia it is not easy to forge cooperation between farmers (and islands can be especially tricky); it takes a lot of persistence and patience. All things considered, she is satisfied with the results, especially concerning her local association.

Positive impacts

“There is enough seed in Croatia, but it is not registered and publicly available.” The organisations in which Ms. Rožić is a member lobby for the facilitation of the registration process of commercial seed-saving of protected varieties and varieties developed for growing in particular conditions in family farms. There have been some positive shifts, but there is still a long road ahead to the actual proliferation of registered seed producers and the enlarging of the seed market.

It takes a lot of effort, money and time to change things but Ms. Rožić says she is noticing a big change in her local community: the people started to sow the heirloom seed, and in general think more about food and sustainability.

“Zogterra” has been a member of more than one CSA since they first appeared in Croatia. Ms. Rožić is strict about the principles of the shops she cooperates with and says that her products are not sold in “souvenir shops with cheap Chinese merchandise”. Even though her products have a slightly higher price than similar products in the market, the customers are increasingly aware of why it costs more and don’t mind paying for the quality and ecosystem services. “All in all“, she says, “the profit is not ‘the king’ here.“

Limitations

Ms. Rožić sees the importance of preserving water, especially in a drought-prone environment such as her island. Since the toilets we commonly use today waste huge quantities of clean water, she built a composting toilet on the farm’s premises and persistently lobbies her municipality to start educating people about their importance. So far, unfortunately, there has not been any moves in this direction.

There is a lack of cooperation and connection between farmers and associations – important information is not reaching people. There should be a platform for short supply chains that would enable more people to get acquainted with the concept, for farmers to have legal and non-precarious access to customers, and organisations to receive financial/logistical support.
Nowadays it is a huge burden on the back of a few enthusiasts that at some point burn out from the stress. Organisations need to communicate better and should be more united.

Ms. Rožić would like to run more educational activities on her farm but she is lacking a partner that would help her with organisational aspects, since she is a very busy woman.
AGROECOLOGY INITIATIVES IN CROATIA

General description

“Biomara” is a biodynamic family farm that is spread on around 6 ha of land in the hilly area of the Križevci region (north-central part of continental Croatia). It is run by Jasminka and Željko Iličić. They grew up in the capital and did not have any contact with agriculture before buying the land. Guided by the desire to produce healthy food and live a peaceful, more humane life, they decided on a career change. In 2007 they started with growing blackberries, but since then have switched to predominantly growing vegetables because there is a big demand for organic vegetables in Croatia.

They had been farming without using any artificial fertilizers and pesticides from the start, and after three years they took their management to the next level and now grow everything following biodynamic principles. They have an organic certificate, but not a biodynamic one, because the process of receiving it is extremely complicated and expensive for Croatian farmers, and they are not sure if it would make any difference profit-wise.

At the moment there are around 50 different vegetable crops and every year they introduce one or two new crops, mostly for the purpose of educating their customers about food which they probably have not tried before. Their profit has been steadily increasing every year. They use some European subsidies but try to keep it to a minimum and not to be dependent on it. They do not till but use a subsoiler so that the soil is not turned over. They prepare many biodynamic preparations, use green manure, and for some time they had manure from their local-breed pigs, but now they make compost. They have noticed a significant difference in soil structure and fertility since they arrived to the land.

All of the produce is sold directly to customers, either through delivery or CSA groups. They do not use any paid promotions and yet the demand for their vegetables is continuously larger than the available supply. Production is expanded every year. Six local women are employed on the farm. Workshops and seminars have been organized in the farm occasionally (2-3 times

OPG Željko Iličić (“Biomara”)

Contact details:

Phone: +38598206364
Email: biomara_opgilicic@gmail.com
Facebook: Biomara OPG Ilicic
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per year) since 2011 with the goal of promoting biodynamic agriculture. Their goal for the future is to expand the production a little bit more and start with the additional activity of agro-tourism and natural building seminars.

What we can learn?

It is important to study the market and find a niche that is not yet filled, even though the trial and error method. The number of organic vegetable producers in Croatia is incredibly low, hence Ms. And Mr. Iličić’s decision to transfer from blackberries to vegetables following the demands of the market proved smart and lucrative. The customers value integrity farming and direct contact with the producers.

Positive impacts

The workers are included in the decision-making process. Each one of them has an area of responsibility and the owners of the farm rely on them to work autonomously to a large degree. All of the workers are rural women.

The income so far has been more than satisfactory. Economic, local, fair, collective commercialization: The farm participates in short supply chains as a part of a few CSA groups: “it is better for both sides – the producer earns more and the consumers know where their food comes from. After a CSA group comes for a visit, our sales increase up to tenfold.”

The percentage of humus in the soil has recently been analysed and there has been a big increase since the farmers first started working the land. They are steadily incorporating more and more ecological infrastructure (flower strips, hedges).

Mr. Iličić believes that they contribute to the better health of their consumers, especially considering the diversity and high quality of crops that they sell. Moreover, some CSAs they work with, particularly GSR Remete, work a lot on educating their group members about food and health, and how to choose more healthy and sustainable diets.

Limitations

The farm uses plastic film mulch for some of the crops, e.g. for strawberries. This and the old irrigation pipes constitute the secondary waste that the farmers try to drive to the recycling centres, but it sometimes ends up in the landfill. Mr. Iličić says he would prefer using biodegradable film mulch but at the moment it is too hard to get in Croatia and it is also very expensive. Another aspect of their business which they would like to work on is the distribution: since they deliver from door-to-door (and sometimes as far as the south Croatian coast), there is a big usage of fossil fuels. They would like to get an electric delivery van but they are very expensive.
There is no cooperation with universities, they are still almost exclusively focused on conventional agriculture: “most professors have a distrust concerning the productivity and viability of organic agriculture and they literally mock it in their lectures”. Economical, sustainable and fair economy: Mr. Iličić admits that in the beginning they were often operating in the grey zone: “if we had done everything following the laws, we would have failed”. He adds that “the government is aware of it but turns a blind eye to have some economic growth” and suggests incentives for new farmers – e.g. exemptions from paying some taxes.

There should be more educational activities geared towards the consumers, to learn the difference between ‘local’ (i.e. ‘domestic’, ‘homemade’) and ‘organic’.
General description

The association for the promotion of sustainable ways of living “Gredica” was founded in Varaždin, in the Varaždinska county (in the north of the western continental part of Croatia) in 2012. Their mission is to carry out educational and practical activities that further healthy and sustainable community living. The project with which the association started were organic urban gardens under the name “Miraculous Gardens” – the first-ever urban community gardens in Croatia. The underlying idea of the project was the creation of stronger bonds in the local community. The Varaždin city government gave land for the project’s purpose free of charge. Soon after, the project received awards for social innovation in national and international contests, and it inspired many similar projects to pop up in other parts of Croatia. Besides being a kind of a gardening school for its users, it has also become a school of communication and organizing, since the most active members become managers of their “blocks” and act as intermediaries between the other members and the association. These smaller groups also decide on how they will use a part of the total budget (coming from the participation fees). There are around 100 members gardening each year, and because the demand for plots has continuously been bigger than the space provided, a new garden will soon be opened in a different part of the city. Elementary school pupils regularly come to the gardens as a part of their outdoor learning activities.

Besides the urban gardens, the association also organizes educational activities on organic gardening, bio-dynamic agriculture, seed-saving, aromatic plants, zero-waste living, etc., for which they cooperate with other organizations from the neighbouring regions (e.g. associations “Duga” and “Biovrt”).

The most recent project that the association has been working on is the “Little Garden for a Sustainable Tomorrow”. In 4 elementary schools in the city of Varaždin they have built school gardens, with the purpose of children spending more time outdoors learning about biodiversity, healthy food, protection of the environment; and simply about where the food comes from and how much effort it takes for it to reach our plates. This experiential learning activity is carried out as a part of the curricula of the first and second grades.
What we can learn?

Nowadays there is a need for urban gardens even in countries with predominantly rural areas such as Croatia. Support coming from the local government, a core team of dedicated volunteers and educational activities that teach people how to grow their food organically, are the key factors for success. However, in order to be financially sustainable, it is a good idea to find ways to involve more in income-generating projects and be less dependent on projects.

Positive impacts

The association “Gredica” actively promotes (and indeed insists on) organic gardening in the urban gardens. The gardeners are continuously educated via various non-formal workshops on the benefits of the organic approach, mulching and composting. The gardens exhibit remarkably high biodiversity, which minimizes the growth of invasive weeds that usually take over these types of plots. There are many different vegetables, fruit trees, flowers, and herbs.

“Gredica” is especially committed to educating citizens (big and small) on healthy, sustainable and local food, food sovereignty, the importance of organic agriculture and the preservation of local landraces. The interest for the seed exchanges and the lectures is very big and many people apply what they learnt in their everyday lives. The school garden projects were attended by 600 pupils and became incorporated in the curricula of the partner schools.

Both the educational activities and gardening encourage people to become actively involved in increasing the level of their health.

Limitations

Even though the community has expressed an interest to start a CSA, there is a lack of activist spirit and willingness to take on obligations that come with running such projects: “CSAs require a lot of (volunteer) work and effort coming from the whole group, which is hard to have in a sustained period, due to consumerist habits, and group conflicts after the initial enthusiasm wears off”. Farmers themselves are sceptical towards this kind of cooperation, and it is quite hard to motivate them to join the group and modify their production so that it would correspond to the group requests: “for these reasons the first CSA group of Varaždin did not succeed but maybe we will have better luck with our next attempt”.

The association currently does not have an established channel for generating income. All of the income comes from membership fees and the occasional projects financed from the local or the central government, or the EU. There
are several issues with this kind of functioning: the membership fees are very small and do not cover the overhead expenses, or the basic wage for at least one employee. Working from project to project brings dependency on the donations, and constant adjusting of the objectives and the activities of the association, to make them complementary to the calls. A large portion of time is spent on complex paperwork. There is no continuity in work because after some time the employees are forced to find another job with more stable conditions, while government authorities (both regional and central) are allocating a very small percentage of their funds to the development of civil society.
General description

The association “Ospera” is an NGO that was founded in Osijek (in the east of Croatia, Slavonia region) in 2013 to popularize permaculture principles, encourage exchanges of knowledge and skills, and act towards the creation of a more livable and healthier environment.

The first activity of “Ospera” was the creation of the first urban permaculture garden of Osijek in the university campus space. They continued with organizing PDC (“Permaculture Diploma Certificate”) courses, lectures on organic gardening and seed-saving, composting, biodynamic agriculture, and seed exchanges.

The association is currently involved in three (larger) projects: the Festival of Biodiversity, SEG (Solidary Eco Group) Osijek and “Use & Reuse” project.

The Festival of Biodiversity is an annual gathering of gardeners, seed producers, farmers, associations, community seed banks and in general everybody interested in preserving landraces and heirloom seeds. The objective of the festival is to assist the creation of a community of seed-savers, transfer knowledge on growing food, and set the foundations for food sovereignty. The association currently has around 500 different varieties in their community seed bank.

SEG Osijek is a CSA group that was founded in 2014. It first operated as a GSR (grupa solidarne razmjene – “Group of Solidary Exchange”), without requiring the farmers to have organic certification. After some bad experiences they decided that a prerequisite for joining the group will be to have organic certificate or to be in the transition period. In cooperation with the city of Osijek, SEG meets every Thursday afternoon in the city’s main farmers’ market. The food can be either ordered in advance, as the group members do, or it can also be bought at the location by non-members. Small dairy farms that pass the within-group control participate as the market’s guests. A new group was started recently in Valpovo, and two more in Našice and Vukovar are planned to kick off soon.
The third project, “Use & Reuse”, is a circular economy project that takes urban waste (used coffee grounds), mixes them with straw and uses it as a substrate for growing mushrooms. After the substrate is used up, it is vermicomposted, and then sold to organic gardeners and farmers.

Their plan for the future is to set up a cooperative of small organic farmers and help them with loans and marketing.

**Positive impacts**

Reducing and recycling waste is important for the initiative. Ospera regularly organizes workshops and lectures on these topics. The SEG group introduced biodegradable bags and aims to recycle all the food waste from the farmers’ market. The farmers that are a part of SEG Osijek are encouraged to minimize waste on their farms as well.

SEG Osijek organizes a “health fair” twice a year, where the agroecological practices that the farmers use are presented to the members, with the goal of education on how healthy food is produced.

“Ospera” cooperates with many other initiatives on the national level, and locally with the development agency and with the Faculty of Agrobiotechnical Sciences of the University of Osijek. They are very satisfied with the cooperation with the City of Osijek and the Osijek-Baranja county. Many of the family farms that are a part of SEG Osijek cooperate with the Faculty of Agrobiotechnical Sciences for research on enhancing soil fertility and the effects of different varieties of green manure crops.

The initiative regularly participates in working meetings on the regional level, where the producers propose how the funds should be allocated.

All of the profits are reinvested into raising the quality of the organic products that are sold and into helping conventional family farms to transition to organic management. At the moment, they are completely viable in terms of finances, all expenses are covered, and they employ an administrator.

**Limitations**

“The government claims that it supports short supply chains, but in reality, they are still not recognized and there is no legal framework for their functioning.” Also, the market is not organized at all – too much people are growing the same crops – e.g. chokeberry; and then the price of it drops dramatically. They need guidance to learn about market possibilities.
“We are trying to introduce more traditional varieties, that exhibit a higher resistance than the modern ones, but there are many issues, because even when a fruit was produced under organic management, if it is not on the list of allowed varieties, we cannot sell it as an organic product.”

It is next to impossible for organic producers in Croatia to find farmyard manure that could be used in orchards (i.e. that is certified organic).
ADIPA – Društvo za istraživanje i očuvanje prirodne raznolikosti Hrvatske
(Society for Research and Conservation of Croatian Natural Diversity)

Contact details:
Address: Orehovečki ogranak 37, Zagreb
Website: www.adipa.hr
Email: adipa@adipa.hr

General description
- Institution status: NGO consisting of private researchers. ADIPA members work for many different institutions.
- Topics covered: ADIPA works on very important topics, which have for a long time been overlooked - traditional varieties and breeds, speleology, natural biodiversity, invasive species, sustainable tourism.
- Objectives: conservation of Croatian natural diversity (geological, speleological, geographical, biological, oceanological, medicinal, veterinary, woodland and agrobiodiversity) through research, education, and promotion.

How the research is done?
- The research is done in collaboration with the Croatian Government, Ministries, National and other parks and protected areas, Institutes, etc.
- The knowledge, opinions, values and interests are discussed and feedback among different stakeholders and the researcher are shared.
- There is integration of many different types of disciplines: geology, chemistry, ecology, biology, medicine, geotechnics, speleology, oceanology, agronomy, forestry.

Type of outputs of the knowledge created
Books, articles, conferences, natural sciences week, workshops, product specification for PGI (Protected Geographical Indication) products.
General description

Educational Center Sjeverovac is a part of the family farm “OPG Džakula”. The farm is well-known in Croatia for high-quality organic meat. The Center offers a large variety of educational activities – from one-day workshops and short practical courses to long-term traineeships. They started with workshops in 1999 when they noticed a gap between the activities of cattle-raising and marketing that some international institutions were promoting as a means of after-war economic growth and the actual knowledge of the returnees in the area. Their objectives are to raise the level of expertise in Croatia (“we stayed in ’65”) and to enable experiential learning for students. The topics they cover are: livestock raising (cows, pigs, sheep), preventing and treating illnesses, grazing techniques and fodder preparation, pasture maintenance, farm economics, etc.

The Centre combines practical and theoretical approaches both in workshops and in traineeships in a deductive manner – the students experience the everyday workings of the farm, and after participating in an activity, they are directed towards the theoretical backing of the procedure. The educators at the farm are Ms. Višnja, who mostly deals with farm economics and tax policies, and Mr. Rodoljub with their two children who are (or will soon be) veterinarians. For specific topics, they bring external experts. The learning activities are designed for high school students, university students and farmers. The students learn holistically about everything necessary for running an economically viable farm with a low impact on the environment and a high level of animal welfare.

What we can learn?

Mr. Rodoljub (very humbly) says: “I do these things every day anyhow, so why wouldn’t somebody learn from it?”

“OPG Džakula” - “Educational Center Sjeverovac”

Contact details:
Address: Sjeverovac 23, 44210 Sunja
Website: http://dzakula.hr/
Email: dzakula@sk.t-com.hr
It is such a pity that there are very few students interested in coming for a traineeship when the Educational Center Sjeverovac offers a great range and depth of knowledge, most of the time for free.

What we can learn is that we need better professors, that will recognize the crucial importance of hands-on learning, and public policies that will “make farming cool again” and promote these kinds of initiatives.

**Positive impacts**

Farmers that participate improve the quality of their farms and contribute to better agriculture in Croatia. Educational Center Sjeverovac motivates students with their success story and provides a rare chance for hands-on learning.

**Limitations**

“The Balkan mentality” – people still do not realize that they need to learn new skills throughout their whole life.

There is a resistance of high school teachers and university professors that are too lazy to take their students to practicums.
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Agroecology initiatives in France

Gabrielle Carvin, Julian Farges

1. Current state of agroecology in the country

Agroecology has long existed in its most noble sense, thanks to pioneers truly driven towards respecting the land they farm. In France, it has also existed traditionally as a means to increasing farmer autonomy.

The agroecological roots of French academia can be found in agrarian ecology as well as colonial agronomy (progressively evolving towards tropical agronomy and the French ethnosciences). In the latter context, French agronomists from the MNHN (National Museum of Natural History) began using the term “agroecology” in the 1930s, referring to the work of Basil Bensin. Among these agronomists, Roland Portères published a course on tropical agroecology in 1947 [1]. Stéphane Hénin, as Head of the Agronomy department at INRA (National Institute for Agricultural Research), also used the term in a 1967 publication, applying ecological principles to agricultural research [2].

Following the cultural revolution of May 68, ecologically conscious agricultural projects emerged in the countryside. In the west of France, this led to militant associations emancipating themselves from the dominant model of agricultural development throughout the 1980s, bringing about the creation of the Réseau Agriculture Durable (RAD) in 1994 [2].

As of the 1980s, while the notion of agroecology began to take shape in scientific literature at an international level, the French public also took part through its activism on the ground. Most of the investment in agroecology throughout France in the 1980s can be attributed to social movements led by several organizations such as Nature & Progrès and those revolving around Pierre Rabhi [1]. Meanwhile, France’s first ecologist presidential candidate in 1974, René Dumont, prefaced the 1986 French edition of Miguel Altieri’s renowned 1983 publication presenting the theoretical foundations of agroecology [3].

During the 1990s, a change of regime was apparent concerning the interpretation of agroecology. France’s Agricultural Research Center for International Development (CIRAD) played a significant role in this change, with an exponential number of publications referencing agroecology since 1995 [1]. Such references in the mid-1990s particularly concerned missions for cooperation highlighting soil conservation techniques typically under the banner of Conservation Agriculture. Nonetheless, agronomists have questioned the technological package tied to this model, which very frequently involves an increased use of herbicides, especially at the beginning of its adoption by farmers [1,3]. Furthermore, CIRAD’s former Scientific Director, René Billaz, has noted that conservation agriculture techniques do not conform to the principles of agroecology when systematically using pesticides [1]. After contributing towards the institutionalization of agroecology within CIRAD, Michel Griffon became the Scientific Director in 1999. Appointed to the French National Research Agency (ANR) in 2005, he played a role in funding research concerning agroecology, making his way up to Deputy Director as an advocate of ecologically intensive agriculture (EIA) [1]. Whereas CIRAD has developed the concept of ecological intensification since 1986, EIA was formalized in 2007 during the Grenelle Environment Forum. Adopting certain agroecological principles to activate ecosystem services, EIA tries to replace the use of fossil energies and chemical inputs, although these are allowed, as is the use of genetically modified organisms [4]. The 2015 International Forum for Agroecology addressed the appropriation or co-optation of...
agroecology by the agro-industrial system, denouncing weakened versions including EIA and Climate Smart Agriculture (CSA) [3]. Moreover, a 2015 CIRAD report establishing an equivalence between agroecology and CSA (backed by fertilizer, seed and biotech industries) caused a large outcry from the agroecology movement [1].

The agroecological transition promoted in Agricultural Minister Stéphane Le Foll’s 2012 agricultural reform is not based in the pre-1990 conception of agroecology. In fact, the think tank that Le Foll coordinates, the Saint Germain Group, did not use the term agroecology before 2012, preferring the terms ecoagriculture and generally EIA [1]. Le Foll may have considered a broad interpretation of agroecology within the 2014 ‘Loi d’avenir pour l’agriculture’ (Law for the Future of Agriculture) as a means of targeting a maximum of farmers with its objective that “the majority of farms engage in agroecology by 2025”. Adopted on September 11, 2014, this law defines agroecology as a “set of agricultural practices that privileges the autonomy of agricultural farms and the improvement of their competitiveness by maintaining or increasing economic profitability, by improving the value added to production while reducing its consumption of energy, water, fertilizers, phytosanitary products and veterinary medication, particularly the use of antibiotics” [5].

Contested for not promoting agroecology among peasant agriculture, this law has further popularized agroecology, yet added confusion to its definition, which was perhaps vague to begin with. Indeed, within the framework of this project, interviewees oftentimes spoke on different movements within agroecology. A distinction was often made between an agroecology that relies on agro-industry, and a peasant-based, more autonomous agroecology. Also, a conceptual interpretation of agroecology emphasizing permaculture, which is highly popularized but mostly practiced in personal gardens, has been distinguished from a more technical and practical agroecology allowing a farm to be both productive and economically viable.

Whether we consider it part of an agroecological transition or not, the initiative that stands out from Le Foll’s 2014 Law is the creation of GIEE (Economic and Environmental Interest Groups) in which groups of farmers, willing to either change or strengthen their practices, may engage in projects that foster synergies among their farms. Promoting collective action at a local level, a bit over 500 GIEE have been recognized since early 2019, covering nearly 10,000 farms, in which groups are typically between 5 and 30 farms, at times more. The level of economic, environmental and social ambitions associated to these groups is not set in advance, as it is up to regional committees to investigate applications case-by-case to determine whether the ambitions are sufficient and expected actions appropriate. Whereas this initiative covers a diverse set of themes, in practice, the measures adopted by a significant part of these groups has been limited to the substitution of a technique, or a specific farm innovation, without implementing a holistic approach [3].

Underlining the importance of biodiversity and farmer autonomy, the legality of traditional or peasant seeds has undergone several recent modifications, although their use towards commercial activities remains highly restricted. France’s 2016 biodiversity law, as a mutual aid measure, allowed farmers to exchange seeds which are not registered in the official catalogue, a right previously limited to members of a GIEE following the 2014 Law for the Future of Agriculture [6]. Whereas France’s Assemblée nationale adopted both the 2016 biodiversity law and the 2018 law EGALIM allowing associations to sell peasant seeds, this right was blocked by the Conseil Constitutionnel on both occasions [7]. Nevertheless, in 2020, an agricultural transparency law legalized the sale of these seeds in the public domain but limited to non-commercial buyers [8]. While such marketing restrictions also depend on existing European seed regulations, recent developments regarding relaxed criteria for organic varieties in Europe’s Organic Regulation 2018/848, applicable as of 2021, maintain several barriers to the diffusion of peasant seeds [9].
Overall, the general population is increasingly conscious of the limitations to the current agricultural system. This awareness has different origins, including the influence of collapsology, in which agroecology is proposed by several specialists in France as a viable alternative. Today, a multitude of local initiatives flourish throughout the country, making up an inspiring movement which receives much attention in certain circles. However, the average French farm is still far from being agroecological as there is much progress to be made.

It is hard to locate specific regions/Overseas Departments and Territories in which agroecology has most progressed, as current initiatives are numerous and diverse. It is true that there exist a few dynamic nuclei that may have benefitted from local policies and/or civil society engagement. The various responses indicate that, among new agroecological settlements, many are led by new farmers with no agricultural background and outside a family setting. Under such conditions, access to land is a major challenge and determines settlement locations favoring rural hinterlands with lower costs per hectare. Consequently, small municipalities can benefit from an economic impetus and social revitalization.

1.1. Social movements

The movements revolving around agroecology in France are multiplying and it is very encouraging. The population is increasingly sensitive to the food it eats, favoring food, which is healthy, flavorful, local, and good for our planet. Consumers are assisted by an increasing number of applications that help them choose their foods. Nonetheless, it has been noted that these tendencies are most common among middle class intellectuals.

In general, a strong division still exists between the urban and agricultural worlds. All too many people are oblivious to how their food is prepared, and to the nutritional impacts of common industrial practices used in food processing, such as “cracking” [10].

Reflecting the urgency of addressing agriculture at the heart of societal discussions, the transition towards agroecology has become a common theme in debates.

There still remains a significant challenge in getting people to seek and understand how their food is produced. Among those that do take interest, it has been noted that permaculture is better known than agroecology, which may be harder to grasp for some due to its vague definition. For the time being, organic agriculture is rooted much deeper in people’s awareness than is agroecology.

As consumers become fed up, various social movements come to life, many of which are more or less influenced by agroecology. Nonetheless, a much stronger general awareness around agroecology is necessary in order to gain ground and hold weight against the agro-industry. Bearing in mind the decision-making power held by consumers, if the majority changes their habits and consumption patterns, the current system will have to give way to new agricultural models.
1.2. Agroecological Practices

Agroecological practices are numerous, making the most of ancient techniques while building on local and scientific knowledge in a continuous process of innovation. As the definition of agroecology is not trademarked, agroecological practices are not limited to any official list of specifications.

Agroecology welcomes a return of biodiversity in the fields, a laissez-faire approach to recreate a natural balance capable of protecting life at all scales (mammals, birds, insects, microorganisms…). Observation is paramount in order to take preventive rather than curative measures. There is no denying that the quality of production entails a different work rhythm.

Although agroecology suffers from clichés in the agricultural world and is at times discredited, given the role of soil as a finite resource or of pollinators among the diverse ecosystem services we all depend on, no farmer is exempt. Changing habits can be a sensitive process, as the transition from conventional agriculture to agroecology is oftentimes harder for the farmer psychologically than practically.

The gravitation towards agroecology oftentimes involves new farmers starting from scratch or conventional farmers that no longer identify with the conventional logic, oftentimes due to environmental or health motives. Adopting agroecology does not take place overnight, as farmers must either research and train themselves, or reach out to coaching organizations. Nowadays, one of the advantages of agroecological know-how is that it is highly accessible online, with a multitude of initiatives allowing a widespread dissemination of agroecological information.

Furthermore, the scientific community has shown interest in agroecological practices, and has demonstrated that it is a viable production system providing both ecological and economic solutions [11].

As implied above, one of agroecology’s driving forces, which should be encouraged to promote further development, is the collaboration between all actors. Whereas several projects from this standpoint have initiated, creating one common database of all existing agroecological methods that all farmers could draw from would help them find solutions adapted to their farms.

1.3. Alternative market and local product distribution channels

In agroecology, short-circuit distribution systems are privileged, and multiple initiatives exist to favor them. Direct sales are often practiced, either from the farm itself, or through specialized markets. The AMAP system (Association for the Preservation of Peasant Agriculture) is largely developed throughout France. There also exist certain groups of producers who come together to open and manage their own shop. Under Participatory Guarantee Systems (PGS), particularly France’s Nature et Progrès, collective marketing schemes enable local farmers to access specialized markets, which may reach beyond the local market [12].
Consumers increasingly gravitate towards alternative distribution systems such as those mentioned above. Consumer entry pathways into such types of distribution are diverse, oftentimes linked to health and environmental motives. People can become aware, for example, through discounted bulk products, the zero-waste movement including deposit recycling systems, through their children’s school lessons or as a health precaution for a newborn. Throughout the country, networks of stores providing local and/or organic products also distribute agroecological products. All these means of distribution used in agroecology are increasingly common, facilitating its development.

2. Initiative analysis

**Ver de Terre Production**

**Contact details:**
- Address: 208 av général de Gaulle 27160 Breteuil-sur-Iton France
- Website: [https://www.verdeterreprod.fr/](https://www.verdeterreprod.fr/)
- Email: contact@verdeterreprod.fr
- Facebook: /VDTProd/

**General Description**

**Description**
This enterprise makes field videos of farm visits, expert trainings, gatherings, festivals and conferences linked to agroecology, all of which are published on YouTube. Ver de Terre Production (VDT) offers trainings, either on-line or instructor-led (or both in association), for farmers in all agricultural sectors throughout France, engaging the most appropriate specialists for each topic.

**Actors:** Team of salaried workers connected to a network of experts.

**Objectives**
- To train a million farmers.
- To disseminate open-source know-how, and provide high-level remote trainings as well as coaching for all types of agricultural projects.
- To provide a video platform service for all types of agroecological events.
Successes

- 2 million views on Youtube over the past two years
- Thousands of farmers trained via instructor-led sessions
- Strong liaisons with French agroecological networks in all agricultural sectors

What is to offer?

- Trainings providing the latest agronomic knowledge.
- Showcase of innovative farms.
- Free access to do-it-yourself agroecological set-up and transition strategies.

Positive impacts

VTD fosters carbon stocks by targeting its storage in soils as a means of nourishing biodiversity, 90% of which lives either on, or in the first 5cm of soil. By nourishing soil, biological activity increases. A strong carbon rate facilitates water retention. Conservation of organic matter allows better water filtration, thereby harboring this resource within the soil. While preserving functional biodiversity, good practices contain the CO2 which is otherwise released in the air.

- By using less inputs, less water and petroleum is used.
- VTD fosters self-fertility processes, which have a huge impact on natural resource conservation.

The fundamental objective of the agroecological transition is achieving economic viability. Practices aim to be profitable as soon as they are implemented. VTD believes this is attainable and has noticed that from the very early years, farms in transition can make money without subsidies. In reality, production costs will diminish, yields will rise little by little and profit margins will increase.

Coaching is meant to ensure the transition results in net gains as of the first year by making the right choices, without having to invest in the transition.

Ver de Terre Production offers quality, mass trainings, both remote and instructor-led, for farmers in all agricultural sectors throughout France. It also offers expert videos freely accessible online.
Limitations

Fulfilling the organization’s purpose, to have a real impact, will require mass involvement.

Sufficient feedback from field experiences needs to be collected so that farmers in doubt can refer to and make use of these testimonies. Agroecological practices must be contextualized and adapted to each farm’s specificities for a successful implementation.

Efforts are still needed in developing high-quality e-learning courses that integrate innovative teaching methods. Such methods should involve peer review processes, engaging all trainees in a collective proofreading and correction of each other’s rationales. Interactive exercises that help participants reason and contextualize may facilitate teaching new practices. In any case, farmers may still depend on personalized coaching and advice to achieve positive local impacts. It is challenging to quickly respond to the increasing demand.
AGROECOLOGY INITIATIVES IN FRANCE

Atelier Paysan

Contact details
Website: https://www.latelierpaysan.org/
Website: http://www.agricultures-alternatives.org/
Email: contact@latelierpaysan.org
Facebook: /latelier.paysan/
Phone: +33 (0) 4 76 65 85 98

General Description

The Atelier Paysan is a non-profit, self-construction cooperative that gathers small-scale farmers, salaried employees, partners and citizens. The cooperative accompanies small-scale farmers in the design and manufacturing of agricultural machinery and infrastructure adapted to peasant agroecology, promoting technological sovereignty as a vehicle for autonomy and food sovereignty.

The Atelier Paysan holds an inventory of on-farm agri-equipment innovations, accompanies peasant groups in the research and development of necessary tools (that either do not currently exist, are unaffordable, or are incompatible with peasant agriculture), trains peasant farmers on metal working skills to develop greater farm autonomy, and disseminates freely accessible, online, open-source designs and tutorials.

Objectives

As an advocate of innovative agricultural technologies, the Atelier Paysan is a member of the InPACT network (Initiative for civil and territorial agriculture) and has made a plea for the technological sovereignty of small-scale farmers through the following actions:

- Collect many peasant innovations
- Develop an approach to machinery for both field work and transformation work in the farm
- Offer trainings adapted to field needs vis-à-vis self-construction
- Take into account women’s access to trainings and their handling of tools and machinery
- Knowledge sharing

By supporting the autonomy of small-scale farmers through the re-appropriation of knowledge and know-how concerning farm production tools, the Atelier Paysan favors technological sovereignty in rural areas. The Atelier Paysan affirms that it is up to peasants to question their own working tools, machines and infrastructure, as well as their financial, agronomic and ergonomic impact.

The InPACT network has taken up these questions and has compiled them in an initial plea which can be used and widely disseminated. Thanks to the Atelier Paysan, we can both find production tools adapted to peasant needs, and learn how to build them.
Positive impacts

Knowledge exchange is at the heart of Atelier Paysan’s activity. Peasant knowledge is valued and shared for the benefit of all.

Atelier Paysan offers training sessions accessible to all, which can be financed by a training fund.

Atelier Paysan adopts an egalitarian approach throughout its projects and training sessions, honoring the work of women at equal value to that of men, allowing the handling of tools adapted to all.

By creating its own equipment, Atelier Paysan is able to reduce mechanization costs and thus be more economically sustainable while increasing its autonomy.
Brasserie Ribella

Contact details
Address: Route de Saint Florent 20253 – Patrimonio
Email: salute@ribella.corsica
Phone: +33 (0) 495371831

General Description

The Ribella brewery is more than just a business, as demonstrated through its social engagements, including its role in a research program affiliated with Università di Corsica Pasquale Paoli and CNRS (French National Center for Scientific Research).

Ribella beer is the rebel side of Corsica. That is, a rebellion against the globalization that seeks to crush us with its standardized, industrial products.

To make a craft beer, what is important is not quantity but method. We are dealing with a living product. All Ribella beers are entirely natural: unfiltered, non-pasteurized, and re-fermented in bottles without added sulphites.

Ribella is free and uncompromising, from the soil where its ingredients grow to the glass where we taste it.

Over the years, Ribella beer has developed, flavors have become more refined, and the community of drinkers has grown. Many awards have rewarded the approach, quality and unique spirit of this Corsican craft beer.

A beer that reflects its land

The Ribella beer is made solely with ingredients of Corsican origin. Every year, fifty tons of cereals are harvested by a young farmer settled in the plains, in Cervioni. The honey, hazelnuts, and chestnut flour all come from island producers.

And lastly, hop grows in an experimental hop-growing field. Ribella has carried out work with the University Pasquale Paoli in Corte and the CNRS to identify a species of hop endemic to Corsica. Brought back into cultivation, this hop is now a part of Ribella’s beer recipes. Seven varieties of hop are cultivated by Domaine Maestracci in Patrimonio, including an endemic species.

From this partnership emerged the ongoing research project “Valorisation of Corsican Hop and Aromatic Quality of Beers” whose objective is to characterize the aromatic properties of endemic hops to strengthen their value and create the first cultivar.
This project has been designed to reflect the dynamics of the brewery towards ever increasing autonomy and the enhancement of the island’s resources.

The hop-growing area, free of any treatment whatsoever, is located at the feet of the brewery. The brewery respects the specifications of organic agriculture but goes further by using cultural agro-ecological techniques involving its raw materials. Moreover, the enterprise is the founder of Slow Food Corsica.

It is a whole living and dynamic landscape that is in the bottle!

Ribella’s commitment to the current research project allows the expansion of the varieties of hop used in beer production, particularly adding value to local varieties adapted to their environment.

The project looks to boost the development of a local market, thereby saving the energy used to ship hop to the island.

Establishing Corsican hop would not only allow Ribella to secure the supply of a local variety, as developing local sales among other breweries on the island would further avoid imports from faraway destinations such as New Zealand, United States, or Germany.
AGROECOLOGY INITIATIVES IN FRANCE

AGROECOLOGY INITIATIVES IN FRANCE

General Description

The Convivium Slow Food Corsica A Granitula connects people committed to advancing good, clean and fair food for all. Cooks, producers, and committed citizens, join the movement and take part in organizing awareness-raising actions needed to change our agricultural and food model. Key concepts for Corsica include: food autonomy, preservation of the culinary and agricultural know-how, and access to food that is locally produced and prepared with taste, for as many people as possible.

Actions

- Cooking workshops for all ages
- Convivial meals prepared with local and natural products
- Slow Food events
- A 3-day festival to reflect on possible challenges and improvements of the island’s agricultural and food system

Slow Food is an international movement whose main objective is to raise citizens’ awareness about eco-gastronomy and alternative consumption. Its goal is to promote the beneficial effects of local food, and to oppose the degrading effects of the agri-food industry and fast-food culture.

Positive impacts

Slow Food advocates for food which is healthy for both people and the environment.

The Slow Food movement aims toward local food for both ethical and environmental reasons, thereby protecting producers.

Slow Food advocates food that respects its heritage. More specifically, the movement looks to maximize the value of local heritage, and preserve what is otherwise all too often lost. In some cases, efforts are made toward rediscovering forgotten traditions.
Confédération paysanne

Contact details:
Maison paysanne
10 rue général Lapasset
11300 LIMOUX – France
Website: https://framapiaf.org/@ConfAude
Facebook: ConfederationPaysanne11
Twitter: ConfAude
Phone Number: +33 (0) 6 31 34 84 59

General Description

The Confédération paysanne is a general-purpose agricultural union, representative at the national level. It is present on the entire national territory, including the overseas departments. It defends peasants in all instances of representation, decision, and consultation, at national, regional, and departmental levels. It is also a founding member of the European Coordination Via Campesina within the international network of Via Campesina, and initiated the creation of Solidarité Paysans.

Since 1987, The Confédération paysanne is a major player of French agricultural unionism, which embodies the values of solidarity and sharing. The confederation has consistently defended its project for peasant agriculture since its creation. This project fully integrates the social, agronomic and environmental dimensions of agricultural production, thereby providing a realistic alternative to the industrial agricultural model, which eliminates too many peasants and diversified agricultural structures.

The Confédération paysanne denounces the frantic competitiveness race that leads to the disappearance of entire sectors of production – we will never be competitive enough vis-à-vis countries that do not care for social rules nor respect the environment.

The Confédération paysanne combats an agricultural model that leads to economic domination by a few hyperproductive and hyperconcentrated structures, just as it opposes a scenic, recreational vision of agriculture. Peasants have a mission that, only they, can fulfill: to feed humankind. Their work has much value and must ensure they receive a fair income.

The Confédération paysanne stands for:
- An orientation of agricultural policies that values agricultural activity and employment.
- Maintaining numerous and diversified agricultural enterprises - the contribution of peasants towards the dynamism and management of our rural territories must be acknowledged.
- Making it possible for future peasants to access land ownership and means of production.
- Recognizing and valuing, at all levels and in all public policies, sustainable and organic forms of peasant agriculture.
- An acknowledgement of the diversity of approaches and actors, in all territories and in all instances, whose mission is the representation and organization of the agricultural world. It is a fundamental principle of our democracy: the State must be the guarantor of a representative governance of all peasants.

Positive impacts

The Confédération paysanne is a support network for farmers. Mutual support, such as through group work, is one of this union’s prevailing values.

The Confédération paysanne influences political decisions and defends its members’ interests.

The Confédération paysanne defends peasant agriculture, including its heritage and traditions.
RESOLIS

General Description

Created in 2010 and operational since 2013, the non-profit association, RESOLIS, took off in 2014. The 22 members of RESOLIS - les "Résolus" – and its 5 permanent team members share a common goal in tackling the lack of recognition attributed to field actors as well as the loss of effectiveness of social actions. Thanks to the trust and support of its partners, and the collaboration of students from the Grandes Ecoles and universities, RESOLIS has initiated numerous efforts in identifying and capitalizing on the innovations and best practices that favor social progress.

RESOLIS' four founding programs cover the following emblematic themes:

- Poverty France
- Responsible and sustainable food
- Combatting energy insecurity
- Education and knowledge against poverty

RESOLIS has taken up the mission of researching, evaluating and valuing field practices.

The socially oriented field actions led by RESOLIS are plentiful, and many are innovative, yet the knowledge and good practices lack structure and exposure, which significantly hampers their effectiveness and visibility.

RESOLIS looks to establishing a “science” of field action, applying the golden rule of capitalizing on knowledge through publications with validated results.

The recognition of actors and the impact of their initiatives will thus be greatly strengthened.

For this reason, RESOLIS teamed up with AgroParisTech (Paris institute of technology for life, food, and environmental sciences). Students from this Grande École research innovative field initiatives, involving both public and private organizations, applying RESOLIS' teaching methods.

RESOLIS documents innovations covering all transition themes, including agroecology. As of today, 700 innovations have been identified in France, plus 200 abroad.

Resolis, through its initiative observatory, encourages people to work together and establish new connections. The numerous initiatives featured in this observatory are described to promote the development and diffusion of their innovations.

Resolis influences local politics by working with French departments.

Resolis champions rural development by supporting innovative initiatives.
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Agroecology initiatives in Hungary

Lili Balogh, Katalin Rethy, Balint Balazs
Case study “Zsámboki Biokert and Cargonomia” written by: Logan Strenchock, Zsámboki Biokert
Case study “Hungarian Permaculture Association” written by: Alfréd Szilágyi, MAPER
Case study “ÖMKI- NBGK- Magház” written by: Korinna Varga and Katalin Réthy
Case Study “Living Tisza Alliance” written by: Péter Kajner, ALT
Case Study “KÖKISZ” written by: Zoltán Dezsény, KÖKISZ and Katalin Réthy

1. State of agroecology in the country

Hungary has a rich history of agricultural production, research and higher education; and there is a wide variety of alternative, sustainable agriculture and food-related initiatives. These initiatives are often fragmented in their activities while also facing barriers related to funding and an enabling policy environment. The term agroecology is not widespread and often leads to confusion. Agroecology (“agroökológia” or “agrárökológia” in Hungarian) is primarily presented in literature as a scientific discipline studying the ecology of ecosystems.

The scientific discipline agroecology has its roots in traditional landscape research, that started to establish in Hungary at the end of the 19th century, when the history archeology, climate, habitats, plant and animal species of certain regions were described in detail. Being multidisciplinary in nature - some of the most memorable landscape researchers were themselves experts in several different disciplines. During the first half of the 20th century, a movement of village research started, with a stronger focus on rural sociology and anthropology [1]. After the Second World War landscape ecology was defined by Marosi and Szilárd as an interdisciplinary field combining geography, landscape descriptions and landscape ecology practices. Marosi was also the one who established a national level landscape evaluation system - defining large, medium and small landscapes and categorizing them by natural factors and agricultural economic potential. Among with more specific national mapping, for example genetic soil categorization of habitats by Pál Stefanovits, the work of these scientists inspired large-scale national projects during the 1980s - 2000s [2].

Ángyán et. al developed a land use zonation system combining the agroecological potential and environmental sensitivity, based on 28 soil, climatic and environmental factors. Additionally, several land use scenarios were developed and changes in land use patterns were proposed [3]. The adaptation of land use to the local conditions forms the basis of the wide-spread discipline and policy of agro- environmental management [4]. Combining multidisciplinary analysis for land zonation and locally adapted, often traditional methods of land use, while keeping in mind cultural heritage and advocating for system-level change; Ángyán’s interpretation of agro-environmental management is very similar to the definitions of agroecology used by the international definitions. Unfortunately, on the policy level, agro-environmental management was reduced to CAP payments, while land access to practice traditional agriculture has been hindered by land-grabbing in recent years [5].
The definitions on agroecology textbooks and research papers hold meaning in the context of agronomy and ecology exclusively, mostly indicating agroecology as a discipline to enhance productivity in cropping systems; although some suggest nature conservation implications as well [6,7]. More recently, Ujj argued for the necessity of including traditional knowledge in agricultural education, highlighting an important aspect of agroecology: the integration of different knowledge systems [8]. Definitions of agroecology similar to those in the international literature, highlighting its sectors and more elaborately connecting it to the themes of food system level transformation, social justice, food and land sovereignty are scattered. The Hungarian Association of Nature Conservation, member or Friends of the Earth Europe has published so far the most extensive material on agroecology, introducing it as a science, a practice and a socio-economic movement [9]. However, this definition is mostly unknown - and the term agroecology - especially its implications for society - is leading to confusion among most professionals. As highlighted by one of our interviewees working in environmental protection movement:

“… for a quite long time in the transnational agrarian movement the term food sovereignty was used and only a few years ago agroecology stepped into the scene. In Hungary, this shift did not happen at all. Nobody understands the term beyond Gödöllő (note: the largest agricultural University in Hungary), and they only use it in its genuine scientific understanding. The complex understanding that entails the movements and the set of practices, as promoted by the Friends of the Earth or the Nyéléni Declaration of La Via Campesina did not infiltrate the public sphere in Hungary.”

Besides confusion in terminology, agroecology in Hungary faces general hindrances in structural factors, as put by one of our interviewees: “Nevertheless, altogether it is our social, economic, and financial system that makes agroecology uncompetitive, lest we create a solidarity economy.” Also, the lack of cooperation in the scientific sphere seems to be an enormous challenge, while at the state institutions we see sloganizing agroecology. Agroecology could provide a clear technical strategy for social movements, but it is hard to translate the scientific knowledge of how to mimic nature into practice. It seems even the dialogue is most often missing between science and practice and that creates a considerable gap between the discourse and practice of agroecology that hinders its upscaling.

Agroecology is not well established in Hungary currently. On the one hand, the isolated practices are getting into coalition and network very slowly. In essence, the whole scientific foundation of R&I for agroecology is lacking support. One the other hand, to create an active and impactful movement, awareness-raising among citizens and decision-makers would be desirable of the potential of agroecology to tackle challenges related to biodiversity extinction and climate crisis.

It is a general experience from the mapping process that the term agroecology or agroecological is rarely used when describing farming practices, marketing outlets, social movements or policies. Therefore, during the Hungarian mapping a set of keywords was used at interviews, during literature and online searches to identify actors related to agroecology. The following is a summary of the mapping results in a separate Hungarian study (yet unpublished).
1.1. Social movements

Agroecology as a social movement is not known in Hungary with this terminology, however, several local and national initiatives are directly related to the topics and goals of the agroecological movements, historically rooted in environmental and organic movements of the early 90s and more recent grassroots activism. A number of professional and stakeholder networks, professional organizations advocate for agroecology related principles and represent a wide range of stakeholders, for example breeders of specific animal groups, CSA farmers or practitioners of permaculture. There are also a number of local grassroots initiatives, associations or foundations representing a wider topic (nature conservation, rural development, consumer education, environmental awareness) with agroecological activities such as community gardens, awareness raising related to local food system and waste management (e.g. composting). “Kertbarát Kör” or “Gardening Friends Circles” and local folklore associations play a very important role in advocating for locally adapted gardening practices and fostering farming and food heritage. Urban and community farms, school gardens are also present and form an important base for environmental and food sovereignty related awareness raising. Seed swaps organized by local associations are multiplying year by year, providing a venue for grassroots activism related to seed sovereignty and agrobiodiversity. Some national initiatives are larger scale international organizations playing an important role in forming the public discourse - for example Greenpeace advocating against political land grabbing or CeeWeb’s activity in awareness raising about agricultural diversity. Others are smaller in scope and size, active in a certain field, such as social farming (Diverzitás Alapítvány), small-scale farmers advocacy (Kislépték); or advocating for various topics: fair trade, food sovereignty, agroecology, social and environmental justice (Védegylet).

1.2. Agroecological Practices

Agroecological practices in farming are present in a number of farms, social initiatives, processing and environmental programs. CSA farms are small-scale family farms marketing almost exclusively to a group of consumers with whom they are in contract with for the whole season. Production is either certified organic or not certified but emphasizing low input use and no use of chemicals. CSA farms are low in number but high in social impact, as they are one of the most important examples of creating local food systems in solidarity with farmers. Small scale and family farms farmers have different relationship to traditional and innovative practices of traditional grazing, mixed systems, breeds and varieties; reliance on traditional knowledge and peasant traditions. Some farms emphasize the aspect of permaculture, biodynamic farming, agroforestry, low-till farming or market gardening. On-farm processing is often integrated at the farm level and relies either on traditional methods or small-scale, but modern processing facilities. Farms managing extensive grazing systems are situated often in natural parks, performing large-scale landscape management with cattle or buffalo (wet areas), Hungarian grey cattle (dry areas) or other types of cattle (sheep, goats). There is a very strong emphasis on the tradition of cattle raising and practice of crafts, the heritage of pastoralism. Farming and processing with a social cause are initiatives showing diverse practices with the aim to benefit a disadvantaged group of people, e.g. social farming to employ people with disabilities, community gardening to provide self-sufficiency for minority groups or
social cooperatives to employ local people. Farming practices can be certified organic, but in certain cases small-scale conventional agriculture is practiced (for example goat farm with external fodder). An important network is that of farmers- millers and bakers, actors are often integrated (farm and mill, mill and bakery). Bakeries work in close relationship with mills for the testing of varieties and providing good quality flour. Traditional methods in bread baking (wild yeast fermentation) and use of some heritage cereal varieties, functioning old mills are present.

1.3 Alternative market and local product distribution channels

There are several good examples of alternative market channels in Hungary with growing numbers. “Basket communities” are initiated by consumer groups or civil society organizations (CSOs) to provide access to a wide range of local products. Involvement of farmers to access the shopping community is based on some form of community involvement (eg. farm visits, questionnaires for producers), but no clear form of PGS is present yet. Importance of geographic proximity and authenticity of products is emphasized, organic certification is not a prerequisite. One initiative is an online platform aiding the organization of community shopping events (Veddegyütt), while also collecting a small percentage of purchases for a social cause defined by the consumers. Consumers and producers can meet directly also at more traditional outlets, such as the “Termelői Piac” or producers market is a controlled name, producers must come from 40 km proximity or the same county (except in the capital, Budapest, where the distance is not relevant for market access). Markets are organized by a private entity, consumer groups or municipalities. In theory, sellers can be only producers, not intermediaries. Organic markets are organized by certification body or CSOs, access is granted only to certified producers, where intermediaries can be present with imported products.

2. Initiative analysis

In the next pages the initiatives selected will be analysed.
Zsámboki Biokert is a 3.5 hectare organically certified and practicing biodynamic farm in the village Zsámbok, Hungary which has been in operation since 2010. The farm includes a one-hectare outdoor vegetable production area, a 3000m² orchard of about 100 heirloom fruit trees planted in the farm’s first year, 2000 m² of unheated polytunnels and three hectares of pastureland. The garden was founded by Matthew Hayes, who has been practicing and teaching organic gardening in Hungary for over 25 years. The size of the garden can be considered “human-scale” meaning that management of all on farm activities is accomplished through the work of human and horse power, and that the farm team complete tasks in close contact with each other and the production environment in a group of 8-10 workers. The garden is oriented to produce vegetables year-round, and it does not rely on supplementary heat for its polytunnels while growing hearty winter greens following cold weather production models. Throughout its existence the farm has served as a pioneer example of social outreach through on-farm learning opportunities and sustainable agriculture advocacy.

Since 2010, the farm has been striving to sustain itself by directly marking healthy organic food to local families while also playing a role in the Hungarian conscious food movement. Cargonomia works as a partner in cooperation with Zsámboki Biokert (collectively as part of The Open Garden Foundation) in organic food distribution and community outreach programming. Its volunteer members manage a cargo bicycle logistics center and local food distribution point in Budapest. The cooperation consists of a cargo-bike messenger service (Arany Kerek), a bicycle-building cooperative (Cyclonomia), and volunteers who maintain a community space and donate time regularly on the farm in Zsámbok and at various urban gardening sites in Budapest. The project team members have worked officially as Cargonomia since 2015. They have been collaborating to implement advocacy and educational outreach and DIY workshops focusing on urban sustainability, organic gardening education, bicycle mobility, degrowth in practice, community activism for more liveable cities and self-sufficient living.

What we can learn?

A main lesson learned from this partnership is that ecologically conscious, agroecology inspired short food supply chains can be facilitated by cross-disciplinary collaborations between unique partners. The meshing of traditional farming methods and human-powered logistics helps to demonstrate that resource efficiency in food systems is not linked solely to
advanced technology or growth-reliant economies of scale. Prioritising building relationships, direct interaction and the development of social capital can enable substantial emissions reductions, preservation and regeneration of landscapes while delivering important positive social impacts. Moreover, the circular nature of this model extends far beyond the prudent use of production resources to highlight reciprocal exchanges between producers and consumers, and the establishment of a participatory, interactive relationship. This summary illustrates why the positive social impacts or co-benefits associated with producing and marketing goods locally should be prioritised as a metric within assessments of agroecological networks. The extended impacts of this localised food network are maximised within the community through regular activities offering participants open spaces for learning and exchange, thereby creating conditions for meaningful dialogue between neighbours, producers, craftspeople and active volunteers.

Cargonomia and Zsámboki Biokert’s collaborative educational and outreach activities bring attention to the potential when socially minded businesses and civil groups unite their efforts. Collective activities are effective in passing on knowledge of organic food production and bicycle mobility, and self-sufficiency in growing food and bicycle repair, while forwarding a dialogue of engaged citizenry, local resiliency and ingenuity, and increased social cohesion through supporting accessible and open community spaces for action and exchange. The intent to pass on knowledge to youth, while providing support to invaluable community centres in Budapest is in line with both organizations’ mission and values. Partners believe that contributing to civil society in Hungary is a calculated strategy with the intent to build solidarity, understanding and resilience within the local community.

Positive impacts

Providing healthy organic food to hundreds of families in their region, and over 3000 weekly organic food box orders per year.

Providing stable employment to 8-10 residents of the village and a healthy, comfortable working environment.

Extending the impacts of both organizations beyond food production through co-collaboration of outreach events in the city and on site in the countryside, reaching a wide range of stakeholders of varying age, educational and social background. The team also participates in development of the Hungarian Agroecology, Permaculture, Marketing Gardening and Organic Agriculture movements. It maintains working relationships with similar actors in Europe. Direct communication and interaction in food production and distribution, and also through outreach work creates a high level of transparency and the creation of a conscious community centred around the farm’s and Cargonomia’s activities. Cargonomia provides assistance in mobilizing and reaching out to urban residents while also experimenting in helping citizens and
students gain a greater appreciation of more self-sufficient lifestyles found traditionally in rural areas.

Cargonomia regularly hosts bachelor's and master's level students as trainees, giving them the opportunity to learn more about grassroots activism, organic agriculture in practice and community organizing. The team also works to increase understanding of solidarity economic systems, Degrowth, and community organized sustainability movements and social gardening projects. Zsâmboki Biokert serves as a study and training farm for young agricultural students aiming to learn more about agroecological market gardening in practice.

Limitations

For both organizations and within the collaboration, general challenges and limitations relate to: maintaining efficient communication during peak production and service seasons; increasing impact of activities without outgrowing the original vision or threatening the core principles of the collaboration; and maintaining a non-profit partnership while surrounded by traditional profit oriented market structures.

On-farm activities and outreach, while in line with the farm’s mission and necessary due to the lack of institutional support for small-scale organic growers, are time and cost intensive and must be balanced carefully within the organization’s capacity.

It is still rare to directly market organic goods in Hungary, even with interest in chemical free and healthier foods rising. In the farm’s near decade of operation, it has sustained itself but has not reached a level of financial stability which secures its future, nor has it allowed the further development of a more comprehensive social-care farming project on site, a goal which is highly valued. The farm team is currently undertaking a process of exploring the benefits and application of “lean” management principles in human scale market gardens in an attempt to make production practices and business management more efficient. Cargonomia’s status as an independent, self-organized collective allows the organization to maintain autonomy, but difficulty arises in maintaining their community space without a traditional income earning aspect of their work. To date their activities and maintenance of their community space have been made possible through donations, self-contributions and sporadic participation in funded civil projects.
General description

The Hungarian Permaculture Association (MAPER) has been formed officially in 2016, after a longer period of informal status since 2006 to represent the permaculture movement in Hungary and linking it with the international network. Today the association has 60 members and has become the representative organization of the permaculture movement in Hungary.

The Association has a broad range of activities, such as research, translation, online communication through its social media platform, design services and advisory. Their main mission is to promote permaculture through education, several different courses are offered throughout the year, including introductory, full design and diploma courses. MAPER offers communication and collaboration platform for farmers, teachers, academics and civil society members.

The association organizes events, convergences, gives lectures and presentations in schools, universities, including recently developed 4-days course for small eco-oriented communities and a yearly symposium for connecting practitioners and academics. The AFINET Agroforestry Network, the Network of Traditional Fruit Growers in the Carpathian Basin (KmGYH) have been partners in events, networking and research. After the success of the first jointly organized events, the partners now collaborate in a yearly event at one of the demonstration farms. Another important academic partner is Szent István University, Faculty of Horticultural Sciences, Department of Ecological and Sustainable Production Systems (Eco-Dept). MAPER is the representative organization of the permaculture movement in Hungary.

One of the main goals of the Association is to spread the idea of permaculture. The Eco-Dept. was always keen to spread this approach not only through optional subjects directly addressed to permaculture but in every single subject they teach. The connection with the Eco-Dept. is longer than the Association itself and it is originated from the years before the foundation of the Association. These bonds became stronger when 3 years ago they started to organize joint conferences and meetings together with AFINET and the KmGYH. To reach a broader range of people a so-called Permaculture Club was started two years ago at the Eco-Dept. with a monthly regularly. During these occasions they try to address actual or popular topics and invite participants through social media.
What we can learn?

MAPER is a good example of how a grassroots, non-formal network can become a major driving force, a social movement, if its members are dedicated and actively participating. Permaculture offers a good opportunity to bring together actors from various stakeholder groups and disciplines. Due to its developed methodology for training and education it is a great toolkit to advance self-sufficient family farming and agroforestry, but also to sensitize participants from a wider, non-farming background to issues of the food system. The cooperation between academia and the Association shows a possibility for research and education overarching the wall of universities, thus realizing a transdisciplinary approach. By applying a viewpoint of permaculture in its courses, the department helps validate non-academic knowledge and the permaculture movement itself.

Conferences and meetings have a very low cost because of sharing the duties and responsibilities which enable them to keep the registration free of charge, which makes it very open. The balance between practice-oriented presentations and scientific lectures/presentations ensures that practitioners, academics and novices enjoy the programs. The cozy atmosphere of the club meetings that they try to keep up with every possible means and it is paying back according to the increasing number of participants. The summer convergence is organized in a demonstration farm fitting to the thematic scope of the event. Participatory approaches (workshops, open space) are favoured to discuss the topic of the conference. Mixing practical and theoretical aspects in events helps the long-term commitment of participants.

Positive impacts

Permaculture is a good basis to spread ideas of ecologically sustainable and socially just farming systems. It is well integrated into the practices of agroforestry and landscape management, offering a holistic viewpoint. More and more students are getting acquainted with the idea of permaculture, meaning they can build these practices into their future work and spread permaculture. Conferences and club meetings can reach many people that increases the popularity and reputation not only of the Association but e.g. the Eco-Dept too, so the more students go there to learn the more could be touched by these ideas of permaculture. Some of the club meetings have practical aspects as well, like the planning and building of a spectacular herb spiral next to the building of the Eco-Dept. It is visible from a busy street and could be attractive for visitors and generates questions, initiates conversations about permaculture with its all informative role. Eco-Dept's 1 day Permaculture courses are met with great interest. This course is open for everyone interested, because it has a non-formal educational form. Connecting academia and the movement results in better visibility and access to interested individuals for both partners.
The conference always has a central theme- the morning presentations are followed by an interactive forum with lively discussions involving different stakeholders and organizations with a focus on identifying the realistic next steps that participants can achieve, showing a participatory methodology. Graduated participants have great interest in joining MAPER, and participating on Permaculture Design Courses organized by MAPER.

Knowledge gained in forums and trainings is translated into practice, creating locally adapted, self-sufficient family farms that put a high value on landscape management and a closed loop resource cycles, keeping in mind interests of local communities. For urban participants, permaculture inspires practices of urban farming, rooftop gardens and enhances local food systems by consumer awareness raising.

Limitations

The available space and financial potential to lend more room are both too limited to invite more people for the conferences. The conferences are organized by volunteers from the Association so the long-term continuity of the event is not guaranteed. Time of the people from the Eco-Dept. is too limited to organize more club occasions. These club meetings are usually on Friday evening to have more working people, but this time is usually less convenient for the students, especially for the ones from the countryside who return home for the weekends.

Very broad range of participants from interested newcomers till professionals, therefore it is sometimes hard to find a good balance of the level of professionalism.
AGROECOLOGY INITIATIVES IN HUNGARY

General description

The Association for the Living Tisza (ALT) was founded in 2006. It aims to improve the livelihoods of people living in the Tisza River Basin, increase flood and environmental safety, preserve and enhance the ecological values of the Tisza.

The Alliance is a network of private persons, non-governmental organizations, municipalities, researchers and farmers. ALT aims to implement the sustainable floodplain management system in the Tisza Basin. Its experts did research and compiled studies on the theory and practice of floodplain management; present their results to the scientific community, decision-makers, farmers and the public. They lobby for sustainable river and landscape management and rural development. ALT helps small and medium scale farmers to reach markets and to introduce environmentally friendly farming systems too.

The Alliance registered the Living Tisza trademark in Hungary, in 2008. ALT and trademark licensees sign a contract. The licensee will receive the right to use the trademark on his/her products/services for a symbolic amount. ALT may control the quality of products and services, which bear the trademark to ensure that they meet the commitments given by the licensee. The licensees, their products or services are presented on the homepage elotisza.hu. Some of them can sell their products in Budapest at ‘Living Tisza’ farmers’ markets, at several shops, for restaurants and by home delivery.

The aim of the trademark system is to help farmers, rural accommodation providers, local processors, service providers of the Hungarian part of the Tisza Basin to access markets. The product / service bearing the trademark have to meet the following criteria at least: 1) made / offered in the Hungarian part of the Tisza Basin; 2) Hungarian; 3) local; 4) meets the Hungarian and EU standards, regulation in effect; 5) the method of production may be: a) conventional farming in transition to environmentally friendly farming, b) environmentally friendly farming, c) certified organic farming, d) landscape Management; 6) the product was grown on natural soil; 7) the product was not treated by ionizing / radioactive radiation. There are a number of characteristics that the product or service is not required to fulfil, but may be voluntarily
recorded in the contract. Advantageous features may be indicated on the product and that may help the sale. Some of the features, which can be recorded in the trademark contract are: GMO-free, soy-free, free from chemical residues, made from natural raw materials, flavored with honey, added sugar and sweetener-free, preservative-free, hormone and antibiotic free breeding / cultivation, landrace or regional variety, Hungarian breed, production without fertilizer, without chemical pest control etc. There are 6 ‘Living Tisza’ farmers’ markets in the capital of Hungary, Budapest, where about 60 producers can sell their own products, there are ~100 producers / service providers presented on the website.

What we can learn?

The trademark can be a tool of building short supply chains. It may represent quality, place of origin, environmental, social responsibility, positive effects on health etc. and it can be a link between producers and consumers, even if they do not meet personally. A non-profit organization with a mission to help small and medium sized producers and service providers will need external funding (grants, socially responsible investors etc.) to run the system. The potential for growth of such a system is very limited. Nevertheless, such non-profit marketing activities are inevitable, because most of the small and medium sized producers do not have the resources for marketing themselves. Forming a network of producers and the goodwill of an organization working for environmental, social goals may be useful in partly replacing lacking financial resources for marketing.

There are more and more people in Hungary, who think it is important to support the Hungarian economy by buying local, environmentally friendly, healthy products. Traditional products, the ‘good old’ flavours, agricultural landraces seem to have a growing market. The trademark helps the producer and the customer to find each other. The trademark offers a new marketing opportunity for fresh food (fruits, vegetables, cheese, yoghurt,…); preserved products (sausage, jam, canned fruit etc.); alcoholic drinks (wine, pálinka [brandy],…); handicraft products (wood, leather, reed,…); and a lot of other products from the Tisza region.

The Alliance for the Living Tisza as an NGO has a goodwill, what can be used to help marketing. The image that the mission of the organization is to help small-scale, Hungarian producers, environmentally friendly production, the retail of healthy products is very valuable. Other activities of the NGO (e.g. research activities, publications, presentations, interviews on environmentally friendly farming etc.) may reinforce the goodwill, and that may bring more consumers. Nevertheless, as the resources for marketing are scarce, social media and the personal network of regular customers may be the most important ways to access new consumers.

Positive impacts

ALT is a non-profit organization. So, the trademark system offers marketing services and sales opportunities very cheap for small and medium sized local producers, service providers some of whom would not even be able to be present on the Internet if they tried it themselves. The ‘Living Tisza’ trademark has gained considerable recognition among consumers seeking local
produce. The 6 Budapest markets serve thousands of customers every year with high quality, environmentally friendly products, many of which are landraces.

The trademark sets minimum requirements for environmentally friendly production methods, while also inciting farmers to adapt non-conventional, agroecological practices. By emphasizing the use of traditional breeds and varieties, the farmers are also rewarded for using these.

The marketing channels are using short distribution market channels.

The trademark helps small farmers, promoting environmentally friendly products; selling products and impulse a healthy diet and nutrition for consumers.

The initiative promotes and develops synergies and collaboration between actors of the food chain and enables direct relationship with the consumers.

The promotion of diversified markets; the variety of income sources for farmers are increased, farmers and producers get fair prices in the short supply chain. Making use of local procurement channels to prioritize local markets and support local economic development.

Traditional knowledge and gastronomic culture in local food production / processing / marketing gets enhances.

Limitations

The producers and service providers of the ‘Living Tisza’ system are rather small market actors. Though, the prices of healthy products, ones produced by environmentally friendly methods, landraces, artisanal products are higher than the average, the profit content of them are low, small producers lack capital for investments. Most of them have difficulties accessing agricultural subsidies and are unable to grow and produce larger quantities in homogenous quality for bigger markets/consumers (e.g. for retail traders). The ‘Living Tisza’ system could connect more consumers and farmers with a greater reliability, if there were more vehicles available and/or the ones used were in better condition. The trademark license fee is only a symbolic amount, the income from that does not cover the costs of running a system for controlling the quality of products/services and the commitments of licensees. Effective marketing activities are very costly and the income from fees is not enough to carry out such. ALT covers its costs mostly by grants. The income from those is uncertain and scarce.
The lack of human resources is another huge barrier for the development of the ‘Living Tisza’ system. The average age of farmers, small scale producers is rising. Agricultural production and local processing is not attractive enough for most of the young people. Family businesses have to cope with the lack of workforce. Running the farm and selling products at markets is a challenge for small actors. Too much administration, hygienic requirements are not only costly, but meeting them is time consuming for small and medium sized actors.
AGROECOLOGY INITIATIVES IN HUNGARY

General description

Community supported agriculture (CSA) was first introduced in Hungary by Matthew Hayes of the Nyitott Kert Alapítvány (Open Garden Foundation) in 1999, but the concept gained wider popularity among farmers and consumers in the early 2010s, when several new initiatives started, mostly inspired by the French AMAP model. Starting from 2008, TVE (Association of Conscious consumers) has developed an active working relationship with URGENCI, organizing trainings and field visits for farmers. In 2013 both ÖMKI (Research Institute of Organic Agriculture) and TVE have published information material about the CSA concept and its Hungarian context. During this time, TVE also has offered several trainings and workshops for farmers and consumers and has become a major organizing force for these initiatives. On different workshops farmers interested in or following the CSA concept regularly met since 2009. On these discussions they articulated the need to have some form of framework in order to strengthen the cooperation and knowledge sharing processes between the interested stakeholders and decided to create an informal network. Thus, KÖKISZ was formed as an informal network of some Community Supported Agriculture farms in Hungary in 2014 by “experienced” CSA farmers. Farmers are part or the network with the coordination of the TVE which is also a founding member.

The goal of the network is:
1) Promotion of CSA concept among fellow-farmers and consumers.
2) Knowledge and information sharing among the members of the initiative through regular group meetings (2-3 times a year), skype meetings and a mailing list.

KÖKISZ has 5 CSA farms and the leading NGO as the founding member of the network, but they are in connection with a larger number of farmers and also working on creating a larger network of farmers. According to the Hungarian agroecology mapping results, there could be 10-15 active CSA farms in the country, although their commitment to strict AMAP rules is not clear. CSA farms have an active membership of 30-160 families yearly, estimated there could be around 2000-3000 people accessing CSA products yearly in Hungary. Currently, the members are working to develop a participatory guarantee system (PGS) to determine what counts as a CSA farm with the participation of consumers.

What we can learn?

This is the first organized forum for CSA farmers in Hungary where they can share experience, knowledge, challenges, and solutions with each other. In an environment where CSA is still
considered innovative as a concept and very few actors are taking place, it is crucial to have a forum where knowledge transfer can happen. Additionally, the initiative also shines a light on the importance of non-formal education, such as workshops and trainings for farmers, where they can exchange experience and practices. Self-organization of farmers is hindered by time limitations, therefore it is beneficial to have an NGO, such as TVE to support the process with both knowledge and organization of events.

Sharing economic information about businesses is quite uncommon, however, old and new members of KÖKISZ regularly do so in order to understand better profitable operation. It is also common that CSA farms send each other possible consumers, once their yearly subscriptions are fulfilled. This kind of cooperation among farmers is based on solidarity, rather than competition, which is also strengthened by the fact that currently more consumers want to join a CSA than there are subscription places offered.

Positive impacts

- This is the first organized forum for CSA farmers in Hungary where they can share experience, knowledge, challenges, and solutions with each other. In an environment where CSA is still considered innovative as a concept and very few actors are taking place, it is crucial to have a forum where knowledge transfer can happen.

- CSA is considered a locally and solidarity based economic model of agriculture and food distribution. Strengthening the capacities of CSA farmers, including their economic consciousness when launching a farm, can result in fewer failed initiatives.

- In Hungary all CSAs follow organic production practices so contribute to the realization of on-site sustainable natural resource and diversity management. Due to the close connection with consumers, farming practices are discussed in detail, resulting in a higher than average consumer consciousness regarding these topics.

- Besides the leader TVE there is no forum to promote and represent the concept of Community Supported Agriculture in Hungary. CSA received raised attention during the past few years, there is a significantly growing demand on safe, local, seasonal food and growing number of consumers interested in the solidarity aspect as well. As a consequence, the message of CSA can reach an increasing proportion of consumers through the network and its members' activity.

Limitations

It is an informal network with loose coordination by the founding member TVE. All the members are small-scale farmers with limited resources to develop an organization. So far it is successful as a surface for regular meetings, discussions and information sharing activities among members but did not
achieve successes in wider promotion of the concept and reach out new members.

TVE is coordinating the network from its own funding, currently there is no membership fee for KÖKISZ. This means limited time for organization and promotion for the CSA model.
AGROECOLOGY INITIATIVES IN HUNGARY

General description

The cooperation of ÖMKi (Hungarian Research Institute of Organic Agriculture), NBGK (National Centre for Biodiversity and Gene Preservation) and Magház (Seed House) Farmer Seed Network is a multi-sectoral partnership in Hungary working for the preservation of agricultural plant genetic diversity. The Initiative first started out as a cooperation between ÖMKi and NBGK in 2012. ÖMKi asked for Hungarian landrace tomato seeds from the genebank of NBGK with the aim to conduct on-farm participatory research on landrace tomatoes in order to evaluate their agrotechnical, plant protection and content related aspects with the help of organic farmers. Besides, processing trials were carried out as well to collect the feedbacks of the farmers and consumers about processed, raw and half-processed landrace tomatoes.

As a result, ÖMKi in cooperation with NBGK and the Szent István University and organic farmers defined the foundations of landrace tomato production technology. Due to the success of the cooperation, ÖMKi launched a communication campaign in 2018 that was built around the promotion of landrace tomatoes among farmers and consumers. In 2019, landrace tomato seedlings were gotten onto the shelves of a large supermarket chain as well. SeedHouse joined the Initiative in 2015 as the missing link of the value chain that represented end-users (consumers, amateur gardeners, small-scale farmers). SeedHouse reinforced the initiative by the organization and promotion of seed exchanges and the on-farm propagation of plant genetic materials. Currently, all three actors are running on-farm networks: ÖMKi is testing and breeding cereals and vegetables with professional organic farmers, NBGK has a network of gardeners and farmers to reintroduce relevant varieties to specific geographical regions, while Magház has a non-formal network of gardeners testing varieties from the community collection for gaining information and possible future landrace registration. Providing access to genetic materials and information for professional farmers and hobby gardeners alike is a coordinated effort of the network and ensured by yearly seed swaps, an official seed request offered by NBGK and mutual participation in organized events.

Objectives of the initiative are to enhance plant genetic diversity in Hungary and in the Carpathian basin through multi-stakeholder cooperation; to make genetic propagation material
AGROECOLOGY INITIATIVES IN HUNGARY

accessible to end-users, to provide genetic material for the organic research and breeding sector and to enhance agrobiodiversity and crop diversity through the reintroduction of landraces and ancient varieties. Promoting ancient, neglected and exotic plant species and varieties as well as the possibilities and methods of small-scale seed saving and breeding through seed exchanges help to boost small-scale plant production based on agroecological.

What we can learn?

The cooperation shows how combined efforts of state, research and movement actors can have a multiplying effect by providing access to a wide diversity of end-users. In this case, it is important to note that through on-farm networks small-scale hobby gardeners, small and medium scale farmers can access plant genetic materials and participate in testing and propagation, making them actively engaged in agrobiodiversity management and creating locally adapted farming systems. Additionally, an important lesson is, that although ex-situ conservation of plant genetic material is an important pillar, when farmers and gardeners get involved, the social impact is as well multiplied through their diverse communication channels; the importance of agrobiodiversity gets emphasized for consumers as well.

The motivation and dedication toward cooperation and network-building from all participating actors and excellent technical competence and expertise from all three organizations results in high level of professional work. The face-to-face, personal contact with end-users (continuous feedback) and due to the different profile of the organizations, positive results can reach a wide variety of audiences (researchers, farmers, policy makers, consumers).

Positive impacts

Agrobiodiversity enhancement through cooperation of multi-stakeholder groups, more and more genetic material emerges from the gene bank and gets cultivated, landraces and ancient varieties get recognized by small-scale producers, gardeners and consumers.

Seed exchanges are becoming frequent events all around Hungary, enhancing the knowledge of the general population about agrobiodiversity. At the same time, a network of farmers-researchers and end-users is being built for the co-creation and sharing of knowledge; breeding is being popularized among farmers, not only researchers while agroecological approach is spreading especially among small-scale farmers and gardeners.

Limitations

Due to the lack of structural governmental support and co-financing mechanisms the activities are under-funded; most of the work by farmers and gardeners is done on a voluntary basis; while ÖMKI and NÖDIK rely on project funds. On the long run, it creates fluctuation among stakeholders and discontinued activities.
There is a decreasing number of farmers and generally the attitude of farmers to test ancient varieties or new techniques is low because farmers’ conception on the economic viability of a production, running a medium and large-scale farm with a limited amount of varieties is convenient and more feasible. There is a negative consumer behaviour toward unknown food (landraces), the communication channels and tools need to be enhanced in order to promote activities.

Communication channels with decision-makers to ensure financial support are not well established.

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Ireland
Agroecology initiatives in Ireland

Cian Blaix

1. Current state of agroecology in the country

The adoption of agroecological practices in Ireland faces multiple important challenges. The geographical location of the country means that it is somewhat isolated from mainland Europe which may mean that innovations originating from there are slow to arrive to Irish shores [1]. This seems to be the case with agroecology as it remains unknown to nearly all Irish citizens according to everyone who was interviewed. There is also a lack of knowledge at the governmental level with no policies in place which directly contribute to the adoption of agroecological practices. However, the government contributes indirectly through European Innovation Partnership (EIPs) projects.

It is hard to determine when agroecological activities started in Ireland as it is a term that is rarely used. Other labels that are used for a sustainable type of farming which would have many similarities in terms of practice to agroecology, such as regenerative farming, permaculture, and sustainable farming, tend to be employed. Although there are farmers in Ireland that practice farming that could be considered as agroecological, one researcher suggested that none would use that term to describe themselves and this was confirmed by nearly all farmers who were interviewed. There is a consensus among the interviewees that agroecology started becoming known in Ireland sometime in the last 10 years.

The state of arts of agroecology could be deemed as being nearly non-existent due to the term not being employed by hardly any farmer to describe their activity. However, agroecological activities are being practiced without the label being applied. Most farmers interviewed would consider that they practice agroecology even if they do not employ the term. Agroecological practices tend to occur in the western and northern part of the country where the land is poorer. These parts of Ireland are well-adapted for the implementation of agroecology due to the higher prevalence of High Nature Value farmlands (HNVf) there than in eastern and southern Ireland [2]. However, the geographical occurrence of agroecological practices cannot be so simply divided as they may also occur in patches for reasons not entirely due to land quality. For example, it was mentioned during the interviews that such practices tend to be more frequent in County Cork than many other counties due to the presence of a niche of people with an affinity to nature, a better food culture with many recognised chefs in the area, and the presence of numerous farmers’ market.

Very little research has been done on the topic of agroecology in Ireland. Using the search tool Scopus ©, twelve articles which included the term agroecology were found which contained the contribution of a researcher affiliated with an Irish research entity (search
conducted in January 2020). Of those, more than half were published in 2018 or 2019. Research related to agroecology in Ireland tends to be more focused on what agriculture can offer biodiversity than how biodiversity can benefit agriculture. This is evident from the amount of on-going EIP projects which focus on species conservation.

The main barrier opposing the development of agroecology in Ireland is the lack of knowledge about the topic. The fact that the topic is neglected at the governmental level means that there is no funding for farmers who wish to transition from conventional agriculture to agroecological agriculture; a transition which can be costly. It also means that there is no training provided for farmers or advisers. Many of the interviewees mentioned the lack of support from Teagasc, the national body which provides advisory and training services in agriculture as well as conducting research. Being a semi-state agency, it is likely that the lack of support that they provide for agroecological farmers is due to governmental policies. Another barrier facing agroecology is the influence of the major agri-food industries which dictate the pricing and nature of the products being sold. There is a risk that agroecological products are being perceived as being too expensive for consumers who are used to shopping in supermarkets and that, subsequently, agroecological products become a niche market for citizens of a certain social status.

Agroecology is a little-known term in Ireland. This is not to say that no agroecological activities or initiatives are on-going in the country. There is a slow rise in movements and practices associated with agroecology although the situation is very much still at its infancy.

1.1. Social movements

A number of social movements have been established (nearly all in the last three years) that could be of benefit to agroecology, whether it be through rewarding agricultural practices, lobbying for greater food sovereignty or supporting minority groups. For example, Farming for Nature is an initiative that was recently established to promote environmentally friendly farming practices while Social Farming Ireland offers people with a variety of needs the opportunity to experience life on a farm (see chapter 3). Talamh beo is a recently established initiative that aims to promote change to the food system in Ireland (http://www.talamhbeo.ie). It is affiliated to Via Campesina and wishes to establish more sustainable, healthier, and environmentally friendly farming practices in Ireland through lobbying and promoting events associated with these themes. Similarly, Regenerative Farming Ireland (https://www.regenerativefarmingireland.com), an association that promotes better income to farmers and more environmentally friendly practices, also advocates for a change to the food system and their vision is described in a recent report entitled Farm-2-Fork 2030 [3]. Foodture is another initiative that promotes agroecology to the general public (https://foodture.ie). They produce a series of podcast and articles which include content related to the theme of fair, local, and sustainable food production. Furthermore, their website contains a “fair food map” that demonstrates the geographical location of farms and other agri-businesses that offer products that are sold at a fair price.
1.2. Agroecological Practices

In 2017, Ireland had the second lowest percentage amount of agricultural land farmed organically or in conversion in the EU [4]. Although not all farms included in the study are organically certified, this statistic gives an indication of the low numbers of farm that practice environmentally friendly farming. Interviewees in general deemed that agroecology was generally unknown to farmers. However, there are some farms that employ agroecological practices in Ireland. In meat production, the Clondarrig farm in Co. Laois, located in the middle of Ireland in a region known as the Midlands, is a mixed-farm which practices permaculture, regenerative agriculture, and holistic grazing. Similarly, Rare Ruminare is a meat farm in Co. Sligo where animals are fed only grass (see chapter 3 for more details). For horticulture, there are a few farms spread around Ireland who use regenerative agriculture techniques. These farms are very much a minority.

1.3. Alternative market and local product distribution channels

There are a few community supported agriculture (CSA) farms in Ireland. There is also a national network, CSA Network Ireland, which supports their activities. CSA Network Ireland is affiliated to Urgenci, the international network for community supported agriculture. The network is under-resourced and is run voluntarily. Nine farms on the island are associated with the network. However, other CSAs exist in Ireland that are not part of the network. Other product distribution channels include farmers’ market and co-operatives such as the Urban Co-Op in County Limerick and the Dublin Food Co-operative. These are very few however compared to the number of supermarkets in Ireland.

2. Initiative analysis

In the following section, we analyze 6 examples of leading agroecological initiatives that can be found in the fields of practice, movement and science. The distinction between practice and movement within our case study is rather fluid. Therefore, some of the initiatives that were listed as practice might as well qualify as movements.
AGROECOLOGY INITIATIVES IN IRELAND

General description

Rare Ruminare is an organically certified suckler to beef farm located in the drumlins of south Co. Sligo in the west of Ireland, owned and managed by Clive Bright. The whole farm encompasses around 43 ha. Building on the core principles of organic farming practices, Clive strives to mimic ecological processes. The cattle and sheep reared on the farm are 100% grass-fed. No grain is used to fatten the lamb or cattle.

Clive sees the farm as a segment of habitat for livestock within a larger landscape. This entails adapting an ecosystem to produce what the farm needs. An example is how weeds are interpreted in the farm. Some weeds are seen as being beneficial to the animals in terms of their nutritional and medicinal values. Others are not edible to livestock but offer ecosystem services by enriching the soil or attracting beneficial insects. The farm also uses weeds as biological indicators of soil quality.

The cattle consist of a breeding herd of traditional breeds such as Hereford, Shorthorn, and Angus and an Irish Moiled bull is a recent addition to the herd. They feed on fresh grass from the middle of April to mid-December before the cattle are housed for the Winter and fed hay and silage with seaweed also added to their diet to provide trace minerals. Currently, housing is deemed necessary to protect the soil when grass cover is low and the soil is wet. Rotational grazing is employed and the cattle are regularly moved between paddocks. This allows for the full recovery of the pasture and for cattle to always have fresh and clean grass. The sheep on the farm are secondary to the cattle in importance in terms of production but their presence increases the diversity of the farm. The herd consist of crosses between blackface-mountain, Jacob and Suffolk which roam freely on the land all year round. The small flock relative to the area means that they do not have any parasite and are therefore never medicated.

Rare ruminare has a simple marketing model. It sells its product directly to the consumer. The beef is sold in a 20kg Beefbox of mixed cuts and the Lambbox is sold as a whole lamb butchered. Orders can be placed on the farm’s website (www.rareruminare.com). They deliver their product nationwide by courier in bio-degradable woolcool boxes. Rare ruminare places an emphasis on the quality of its product. It argues that the meat is of highest

Rare Ruminare

Contact details
Address: Ballymote, Co.Sligo - Sligo, Ireland
Website: http://www.rareruminare.com
Email: clive@rareruminare.com
Facebook: /therareruminare
quality due to the livestock’s 100% grass-fed, organic diet, the traditional breeds used, and the work of the abattoir including the ageing process of the carcass and skilful butchering.

It is a future goal of Rare Ruminare to have its cattle grazing outdoors all year round. To this end, Clive is planning to plant trees across the farm to create a silvopasture or woodland pasture. The addition of this carefully designed tree planting will create a more resilient system with an improvement of the soil function and water-cycling and the formation of a micro-climate to give shelter to the livestock, while increasing the length of the growing season. Clive has planted pioneer trees such as alder and birch together with the eventual climax trees such as oak and scots-pine to mimic the natural succession of a woodland. Although Clive’s farming practices are environmentally motivated, he also states that it makes economic sense to farm this way as well. For him, the environmentally friendly aspect of his farm and economic gain go hand in hand. He is a strong believer that, where nature thrives is the most profitable place for a cow to live.

What we can learn?

Clive’s system has nearly zero external inputs. His extensive farming practices mean that he rarely has to make use of medication for his animals. He sells his meat directly in order to get the right value for his efforts. He is one of the very few farmers in Ireland to feed grass to cows all year round without ever having to resort to buying grain.

Positive impacts

The farm decides the price of the meat and sells it directly to the consumers.

The farm makes the most of the natural resources available and uses little if any external inputs. He favours high biodiversity grasslands over species poor grasslands.

The farm contains different traditional breeds of cattle such as Hereford, Angus, Shorthorn and Irish Moiled.

Limitations

The farm is located in a part of the country where demand is limited. This and the fact that it sells its product in bulk (20kg for the beef) forces it to not just sell its product locally but also to deliver its meat nationwide.
Moy hill farm

Contact details
Address: Lackamore, Co. Clare
Website: https://www.moyhillfarm.com
Email: info@moyhillfarm.com
Facebook: /moyhillcommunityfarm

General description

Moy hill farm is located in Co. Clare on the west coast of Ireland. Although the farm manager, Fergal Smith, does not usually employ the term “agroecology” to describe his farm (he prefers to use “regenerative agriculture”), he does consider his farm as being agroecological. It is a mixed horticulture farm located near the Atlantic Ocean. Moy hill farm started as a market garden on a quarter of a hectare of borrowed land in 2014 before moving to 7 ha of land which was acquired in 2015. Later, additional land was bought and today it is a mixed farm on 27 ha of land. A hectare of that land is dedicated to market gardens, while the rest of the farm is composed of pastures, orchards and woodlots. Around 30,000 trees have been planted on the farm. Some were planted around the market gardens to act as a windbreak. Others were planted to develop microclimates for the animals to form an agroforestry system. For example, one field consists of rows of alder and rowan where animal graze. Apple trees were also planted to form an orchard with enough space left between rows to allow cows to graze. The other types of animal found on the farm are turkeys which are moved around the farm to fertilise the land and pigs which help clear weeds.

The farm is situated on poor wet land with little soil. The presence of the animals is considered to be key to the functioning of the farm through its potential of regenerating soil. Soil regeneration is a major component of the type of farming that is practiced in Moy hill farm. This is done by not tilling the land and using animal manure to produce more soil. Part of the farm is off-grid and uses solar and wind energy to supply electricity.

Moy hill farm has a market policy of prioritising food provisioning for local people and restaurants over selling to non-local customers even at the expense of making less money. It uses multiple market models to sell its product. It sells its products in farmers’ markets in two nearby towns. It also makes use of the Reko trade model. This consists of pre-ordering the products on a social media outlet and collecting them at a designated pick-up point. It also uses a Community Supported Agriculture (CSA) model which guarantees members (around 50 in 2019) a vegetable box every week from end of April/ beginning of May to December. The boxes are collected at the farm or at a farmers’ market. The farm also has a farm shop where consumers can come to the farm and buy products directly from the farmers. Finally, it also sells directly to restaurants which allows it to sell large quantities of products.

The community aspect of the farm is considered as an important component to Fergal. He did not want to farm alone at the risk of becoming socially isolated. The farming team consists of three permanent members while interns are hired to work on the land. Moy hill farm not only
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provides food to the local community but also organises social and educational events. For example, each year they organise a farm gathering, a festival held during a weekend dedicated to workshops, music, talks, crafts and food.

In the future, the farm aims to plant more trees to create a forest to better accommodate pigs. As well as offering a new product, these pigs would offer an additional service by clearing weeds of the land. The farm also aims to become a Savory global network hub; a holistic management training, learning, and demonstration site (https://www.savory.global).

What we can learn?

The diversity in market use offers the farm financial resilience. The use of the Reko model provides easily accessible pick-up points and convenient pick-up time for customers with normal working hours. The CSA provides financial stability to the farm as they are guaranteed an income in advance of parting with their product. The farm’s use of animals as well as its no-till practice is a good example of how to regenerate soil without using external inputs. The organisation of social events provides a stronger link with the community.

Positive impacts

- The farm decides the price of its product in most cases. It prioritises local consumers.
- It is a CSA farm that is part of the national CSA network. It sells its products at local markets and makes use of a variety of markets.
- The farm does not use external chemical inputs. It practices mixed farming to produce organic matter to fertilise the soil.
- It is a CSA farm that is part of the national CSA network.
- The farm hosts interns and teaches them sustainable farming practices. It also holds events which include talks and workshops that may discuss themes related to agroecology.

Limitations and challenges

The geographical location of the farm means that there are no local cities where they can sell their products. Ennis is the biggest town in the area with a population of ~25,000 and is located about 27km away from the farm. This poses a challenge to increase the adherents to the CSA.
Social Farming Ireland provides a wide range of services to support the development of Social Farming in Ireland and is funded by the Irish Department of Agriculture, Food and the Marine (DAFM) under a 4-year contract (2016-2020). Social Farming Ireland is based in Drumshanbo, Co. Leitrim and is led by Leitrim Development Company, a Local Development Company. To date, Social Farming Ireland has delivered over 6,300 placement days to approximately 790 participants on 77 social farms throughout the country.

At its simplest, Social Farming involves giving people with a variety of needs the opportunity to spend time and derive benefit from being on ordinary family farms. People who have successfully engaged in Social Farming include people experiencing mental health difficulties, people with disabilities, older people, younger people at risk, refugees, people availing of drug/alcohol rehabilitation services, the long-term unemployed, and people with dementia. The main aim of social farming is to allow participants to socialise and gain confidence in a friendly and supportive environment by allowing them to spend time on a farm.

Social Farming can benefit participants in many ways. First of all, it reconnects people to the land and farming. It can improve the physical health of participants as they engage in everyday, natural physical activities out in the fresh air. It may also improve their mental health as they increase their self-confidence and self-esteem as well as their social skills as they get an opportunity to talk to people and make friends. Participants can also develop occupational and life skills from undertaking farm-based activities and also typically uncover or develop an interest in farming, nature and biodiversity.

The advantages of Social Farming are not limited to the participants. Social Farming offers the opportunity to farmers to diversify their income as well as their farming practices. For example, some livestock farmers involved in Social Farming started growing vegetables as it is an activity that the participants enjoy. The income provided by Social Farming can alleviate the financial strain felt by many family farms and help to preserve the socially valuable model of the small diversified family farm. Although farmers are remunerated for their involvement in Social Farming, their main motivation is usually the sense of personal satisfaction from supporting others to develop and grow. Farmers appreciate the companionship as well. Farming can be a lonely occupation and many farmers appreciate the opportunity to spend time alongside others and to see new life and energy on the farm.
Social Farming can also benefit the environment and biodiversity. Planning for Social Farming and the activities which take place during placements often involve environmental improvements, including improved hedge and forestry management, clearing and tidying of the farmyard, vegetable and fruit planting, etc. Although most social farmers typically farm in a way which is close to and respectful of nature, Social Farming practice encourages farmers in taking environmentally positive actions which are also enjoyable and meaningful for participants. For example, many farmers set up bird and bat boxes on their farm, sow wildflower meadows, plant trees, or establish sensory gardens. Overall, Social Farming encourages a holistic approach to farming and the land management, where the people, the animals and nature are valued and respected.

What we can learn?

Social farming Ireland contributes to a more inclusive society while also promoting environmentally friendly farming practices.

Positive impacts

- The initiative provides physical and mental health benefits to the participant.
- The initiative encourages farmers to practice more environmentally friendly farming practices.
- The initiative allows people with a variety of needs the opportunity to socialise and acquire new skills in a family farm.

Limitations

- Some of the participating farms use conventional farming methods.
Farming for Nature

Contact details
Address: Burrenbeo Trust, Glebe Road, Kinvarra, Galway
Website: https://www.farmingfornature.ie
Email: info@farmingfornature.ie
Facebook: /farmingfornature

General description

Farming for Nature is an independent, not-for-profit initiative that was started in 2018 to encourage and reward farmers who adopt practices which support or enhance biodiversity. It does this by providing resources, activities, advice related to sustainable farming and by holding an annual national award for Farming for Nature ambassadors. These ambassadors are chosen by a panel based on their farming practices and their impact on biodiversity. The organisation is composed of four core members with all but one of them working voluntarily.

The main goal of Farming for Nature is to promote practices that lead to the enhancement of nature value of farmlands by finding farmers who, through their actions, support biodiversity. These farmers are nominated by accredited professionals involved in “farmland biodiversity” for the annual awards. A short description of all nominated farms is then published on the Farming for Nature website (https://www.farmingfornature.ie). The list of nominees is then whittled down to a shortlist with each farm on the shortlist being visited by the judging panel. The farmers on the shortlist are filmed to share information of their experiences and practices in the hope of inspiring others. A further shortlist is then created with each farmer on the list being nominated as a Farming for Nature ambassador before a final overall winner is voted for by the general public.

The award process allows Farming for Nature to develop a network of farmers who can become role models to others who wish to transition to a more sustainable agricultural system. Farming for Nature provides a platform for advice and advocacy for farmers that wish to enhance nature on their farm through this network and their numerous partners. Easily accessible resources are provided to these farmers including videos, podcasts and how to do guides for different farming techniques and different habitats. Furthermore, Farming for Nature creates networking opportunities and peer to peer learning for farmers by organising events such as farm walks, talks, and networking events. As well as promoting agroecological farming practices, this initiative plays a social role as it demonstrates to the general public that many farmers have an affinity to nature. This is important in the current social climate where farmers are often portrayed as people who do not care about the environment.

What we can learn?

Farming for Nature provides a simple way of rewarding farmers for applying environmentally friendly practices on their farm.
Positive impacts

The movement promotes the adoption of farming practices that reduce environmental damage and improves the natural health of the countryside.

The movement encourages farmers to adopt their practices in such a way as to increase biodiversity.

The movement has formed a network of farmers where ideas can be exchanged and advice given on the subject of transitioning to a system which enhances farmland biodiversity.

The movement offers resources and peer to peer learning on the subject of enhancing farmland biodiversity and reducing environmental damage.

Limitations and challenges

The movement wishes to provide advocacy on the theme of environmentally friendly farming approaches and a challenge to actually applying suggested changes could be current governmental policies which are not compatible with the desired changes.
General description

The DANÚ project aims to develop a biological farming transition programme for conventional farms. It is funded by the Rural Development Programme (RDP) 2014-2020 and falls under the umbrella of the agricultural European Innovation Partnership (EIP-AGRI) projects. It initiated in 2018 and will be funded until 2022.

The main aim of the project is to offer conventional farms a programme for transitioning to biological farming; a type of farming which aims to reduce synthetic inputs by improving soil quality. It aims to do this by identifying in current soil, crop and pasture management systems to then develop guidelines for a cost-effective transition programme. The project is strongly focussed on practices which enhance soil biological function.

Twelve farmers are currently involved in the project. These farmers are reducing or removing damaging external inputs that they were using by replacing them with environmentally friendly practices, for example, by buffering nitrogen inputs with a carbon source such as charcoal to reduce leaching. The aim is not for them to immediately change to a biological farming system but to slowly adopt biological farming practices. This approach is deemed as likely to be more favourable to many farmers, as one of the project coordinators, John McHugh explains that a sudden stop to external nutrient inputs could lead to a devastating drop in output and income until soil biological function can adapt to low or no inputs.

Although not specified, the DANÚ project can be considered as being beneficial to the cause of agroecology in Ireland. Although external inputs are permitted in biological farming these are allowed to strategically boost output, all be it in a more thoughtful way than in conventional agriculture. It is very much focussed on soil health and can be a useful practice to help transitioning to an agroecological system. Furthermore, an important part of the project is to promote soil biological diversity. This is done by promoting a diversity of plants which leads to a diversity of micro-organisms in the soil and macro-organisms aboveground.

What we can learn?

DANÚ may provide solutions for how to transition from conventional agriculture to a more sustainable type of farming through improving soil health.
Positive impacts

The aim of the project is to offer clear guidelines to transition from conventional farming to a more sustainable type of farming. This can be a very important resource for farmers as it is difficult and perhaps unrealistic to attempt to suddenly cut all external inputs in a conventional farm and adopt agroecological practices. The project also encourages to promote belowground and aboveground biodiversity.

Challenges and limitations

The project limits its goals to improving soil health. It is a four-year project which might pose a challenge as it may be difficult to see significant changes to soil quality in less than four years.
General description

Protecting Farmland Pollinators is an agricultural European Innovation Partnership (EIP-AGRI) project which initiated in 2019. Its general aim is to encourage farmers to make their farmland more pollinator friendly. The project is in continuation of the All Ireland Pollination Plan which established guidelines to protect the pollinators of Ireland.

To achieve its general goal, the project aims to test which measures are more efficient and cost-effective for promoting pollinators and to determine their effects on biodiversity in general. It also aims to establish a farm-scale scoring system based on these measures to determine how pollinator-friendly a farm is. Finally, farmers will be enticed to improve their farm score by rewarding high scores using a result-based payment scheme which will be developed. Due to the current global decline in pollinators and their importance in agriculture, this initiative can provide useful research for establishing agroecological practices in Ireland (1). It also promotes biodiversity-friendly farming through the research that will be conducted and by financially rewarding farmers who apply their recommended pollinator measures.

What we can learn?

This project may provide solutions to increasing the number of pollinators in farmlands by establishing an evaluation system for the capacity of a farmland to host pollinators.

Positive impacts

The project aims to increase the number of pollinators in the farmland with increasing farmland biodiversity also in mind. Research in determining the most cost-effective and efficient practices to achieve this could provide an important resource. The scoring system that the project aims to develop could be a useful tool if employed with the establishment of new policies for the enhancement of the number and diversity of pollinators in Ireland or in other countries.
Challenges and limitations

The project runs for four years. Encouraging farmers to keep up practices which promote pollinators after the project is over and the end of the payment scheme may be a challenge. Farmers may also be willing to participate knowing that they have the possibility of making a financial gain for years without making a long-term commitment to changing their farming practices.

3. Bibliography


4. Acknowledgements

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1. Current situation of agroecology in the country

Favourable climate conditions, soil characteristics\(^1\), physical resources and historical heritage are enabling diversified agriculture all over Serbia\(^2\). Even though the previous three decades have been a challenging period for Serbia facing numerous crises which affected the resources and organization on the country level\(^3\), the agricultural sector remained one of the most important contributors to the economy and country’s trade balance\(^4\). That is the case due to numerous smallholders with the land up to five hectares, which make the majority of agricultural producers\(^5\) and who are struggling against industrial agriculture to survive. Both small farmers and big companies have as a new priority to embrace new development goals and improve the environmental protection, rational use of natural resources, pollution reduction, efficient use of fossil fuels and the use of renewable sources, sustainable production and consumption, conservation of biodiversity and other requirements of EU\(^6\).

The application of agroecological principles started long before the word ‘agroecology’ has appeared in Serbia. Only few decades ago people have practiced sustainable and agroecological farming, as it used to be the only way of agricultural production. However, as time went by, those principles have been replaced by modern industry and conventional agriculture and the term agroecology remained unknown. Even though the word 'agroecology’ is not well-known in Serbia, most of the farmers are familiar with the underlying principles.

When it comes to science, during 1970s and 1980s the main principles of ecology in agriculture have started to emerge within the subject Principles of crop science, in the Faculty of Agriculture in Belgrade. During that period, certain scientists have tried to emphasize the environmental problems caused by conventional agriculture, but it was only recently that agroecology is recognized as a solution for addressing that issue.

Current state of the agroecology in Serbia comes down to organic farming and scientists agree that there is a long way ahead until agroecology becomes recognized among the general public. On the other hand, if organic farms and companies were obligated to comply with existing regulations referring to ecology, Serbia would be completely agroecological and a sustainable country. Still, there is a large number of organic farms which exists only due to the subsidies, aiming to make profit, while authentic, organic, sustainable and ecological farms represent a minority as they exist because of the farmers’ enthusiasm solely. Anyhow, there
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is an insufficient awareness of civil society, as well as farmers, regarding the importance of environmental protection and conservation.

In general, 46.81% of total agricultural land in Serbia is located in Vojvodina region, northern Serbia¹. It is estimated that there are around 4000 organic farms in Serbia, of which 60% include smallholders placed in northern region⁴. That is the case since Vojvodina has numerous state and local government subsidies, and NGOs advocating for farmers' rights. Local governments and municipalities have a crucial role in the development of the region and empowerment of the local farmers. Additionally, the regions with higher number of initiatives usually have more educated people and enthusiasts, or local politicians who have recognized a chance for economic development of the region. Despite the fact that there are ministry projects and incentives for regions all across the country, they last only a certain period, and when the funds are cut, it is up to farmers and enthusiasts to continue the work without any compensation. On the other hand, there are independent and non-profit associations, such as Ana and Vlade Divac Foundation (which is in cooperation with Mionica municipality have offered grants for the development of organic agriculture, with priority being given to young farmers and women) and Novak Đoković Foundation (which financed the organic agriculture education in kindergartens) that organize awareness raising campaigns and support organic farmers.

Agroecology is recognized among civil society only on the level of environmental protection and organic agriculture since there is a growing number of organizations tackling with environmental issues. When it comes to agroecology as a broad and complex concept, citizens are not familiar with the terminology, and often identify it with other types of agriculture. The awareness of the consumers regarding climate change and environmental issues is growing, but the role of agriculture in such matters is mostly unknown. Same pattern is present for policy makers, since agroecology is not recognized at the decision-making level, and the government does not offer subsidies for agroecology, or any other type of alternative to conventional farming, but organic agriculture. Policies, subsidies and incentives are numerous for organic farmers, but if their farming is in accordance with agroecology, that is more a matter of ethics. Existing regulations for agriculture include ecological aspects but the outcome depends on each farmer individually, since adequate control for application of ecological principles in agriculture does not exist.

The main barriers in the development of agroecology are the lack of knowledge and appropriate political tool which support an environmentally friendly and at the same time productive and economically viable agriculture. At the moment, the system of agricultural statistics does not contain respective indicators for the field of agroecology, and further activities within the Census of Agriculture are expected to provide them, in accordance to common EU agricultural policy¹. In addition, Serbia is facing the lack of finances at all levels of the value chain, as well as unsatisfactory organization of stakeholders along this chain⁵. Besides, environmental issues in Serbia have to be approached from a country level, regarding all industry sectors, including agriculture. When it comes to agriculture, there are no incentives for environmental protection, for crop rotation or any other agroecological practices. Better promotion of agroecology by the government, improved legislation, and education of farmers and consumers is necessary.
Serbia is in the process of accession into the EU, after which the series of adjustments to EU standards and regulations are expected to take place. IPARD (Instrument for Pre-Accession Assistance for Rural Development) program already provides 60% of refunds of farmer's investment through IPARD funds, which promote rural development and sector of organic agriculture. The prospect for future development of agroecology is definitely present. There are a growing number of initiatives dedicated to environmental protection, sustainable farming, food sovereignty, social justice and equity which are slowly joining together with common vision to improve the quality of living in Serbia. Farmers are willing to change and adapt to environmentally friendly practices, but proper education, good examples, and governmental support are needed. There are a growing number of young, educated people leaving the cities and starting their own farm business in rural areas, as well as young children learning about agroecology from the age of five, and whose generation gives hope for changed mentality of people in Serbia.

The misunderstanding of agroecology is a common and unfortunate situation in Serbia, even between scientists and academics. While one part of them believe that every organic farm is thereby agroecological, the other emphasize the potentially big gap between those two. Serbia is very unique not only when it comes to diverse farming habits and geographical features, but also the perceptions related to which farming system represents agroecology at its best.

1.1 Social movements

The agroecological movement in Serbia has started in 1990 when the first NGO, "Terra's", dedicated to the promotion of organic farming, was established in the northern part of Serbia. Autonomous Province of Vojvodina stands out, not only by the area under agricultural production, but also by the networking and coordination of NGOs involved in the promotion of agroecology. Outstanding initiative from the same region is Vojvodina Organic Cluster, which aims to increase innovation and efficiency of organic farms, and serves as a link between authorities and producers. Cluster is providing education for environmental protection and organic farming for preschool and primary school. The National association for development of organic production "Serbia Organica" is the NGO established on the initiative of the Ministry of agriculture and other actors within the organic sector, and provides promotional and awareness raising campaigns, education of farmers and information about subsidies, financial support, and legal frameworks.

The food sovereignty movement in Serbia is in the starting phase and there are not many organizations dealing with this topic. The left-wing NGO, Zrenjanin Social Forum, has estimated that Serbia has lost its sovereignty in food production due to the ownership of agricultural land by large companies, high number of foreign investors and the difficult market position of smallholders. Indeed, low agricultural investments, transitional privatization and market liberalization resulted in a drastic decline of small family farms during the last 30 years. Same trend is present today, since the economic development model aims to attract foreign investors and support privatization of the state-owned property. Another way of land grabbing present in Serbia is long term lease of agricultural land, which aims to attract foreign investors. Therefore, better access to land is necessary in order to provide the strengthening of the
smallholders and initiatives focused on making the new policies which will benefit smallholders³.

Organized in collaboration with certain initiatives and farmers, numerous manifestations are taking place during the year, focusing on indigenous breeds of domestic animals and cultural heritage (Fair of Balkan Agro Biodiversity and Rural Heritage, in Dimitrovgrad), the effect of food systems on climate change and environment (Green Fest in Belgrade), networking of organic farmers and their promotion (The International Agricultural Fair, Novi sad), education for children related to sustainable and organic agriculture and rational use of natural resources (Organic Live Fest, Belgrade) and many more.

### 1.2 Agroecological Practices

The parameters of the use of agroecological practices in Serbia are not quite promising. Agroecological practices such as cultivation of cover crops and mulching are rarely used, and soil is often left uncovered during winter months. Data from 2012 suggested that conservation tillage is practiced on less than 10%, while no tillage is practiced on less than 1% of total agricultural soil in Serbia. There is no official data regarding the farms that practice crop rotation. Less than 10% of soils is fertilized with manure, which is most frequently inadequately used and stored. Environmentally unsustainable practices from the agroecological point of view are obviously present, since 1 out of 9 farmers are doing the soil fertility analysis before the fertilizing treatments¹. However, significant number of farms and individual producers are gradually improving this statistic. Ms. Tanja Vujanov from Vojvodina organic cluster said that farmers are pleasantly surprised when they see the effect of intercropping, covering crops or other agroecological practices and often wonder why no one advised them before to do so.

Even though it is very difficult to establish closed loop agriculture in Serbia, since integrated crop-livestock systems are rare and livestock producers have difficulties to get organic certificates, other alternatives to conventional farming emerge, which oftentimes promote agroecology better than organic farming systems. There is a growing number of biodynamic farms such as "Dairy Petrov" (dairy products), IVA-Farm (animal husbandry, vegetables, fruits and cereals) and permaculture farms and gardens, promoted and supported by Permaculture Association of Serbia.

### 1.3 Alternative market and local product Distribution channels

The main market channels in Serbia are specialized shops, green farmers' markets and supermarkets⁶. Green markets specialized for organic produce can be found in the big cities like Belgrade, Novi Sad and Subotica. Except for the organic milk, products from livestock farming are scarce. Since smallholders and family farmers cannot provide the whole year supply for restaurants or hotels, the main market channels in Serbia are short value chains and domestic markets. The results of a survey showed that costumers usually buy or would buy their products in farmers' markets and supermarkets (34.9%), in specialized stores
(31.5%), directly on the farm or get a home delivery (14.7%), and lowest share of costumers chose online shopping (<1%)\(^7\).

There is no official statistics for the local markets and green market turnover\(^8\). The retail sector is underdeveloped, and due to the big number of fake products promoted as organic or ecological, the costumers have become sceptical and distrustful. Therefore, farmers prefer direct contact with their costumers, either on the farmers’ markets, or from their home. These issues have to be addressed as soon as possible, and better inspection with high penalty rates should be implemented in order to protect both farmers and consumers\(^9\). Besides mentioned, farmers are facing unstable demand and monopoly of the big players on the market, which are making their business insecure\(^3\). Further development of the local product market requires strong campaigns with a clear communication strategy\(^10\).

In order to overcome part of the problems that farmers and costumers are facing, in 2016 the first online organic food market OrganicNet was developed by the Eton digital company from Novi Sad. This online platform enables direct communication of farmers and consumers and negotiation without the middlemen. Through this, farmers have better access to the market and the ability to promote their farm, to share the knowledge, good practices, to collaborate and communicate with more potential buyers, which in return, have much cheaper and reliable goods.

Certain alternative markets have been established in collaboration of farmers with civil societies, NGOs and local municipalities, which enabled manifestations and local fairs where farmers can directly sell their products. A domestic market of organic products is still underdeveloped despite of several positive changes that happened in the recent years. Awareness of the citizens improved mostly in bigger and urban areas, which has led to better assortment of healthy products in most of retail shops\(^5\). However, the lack of consumer awareness about health and environmental benefits of agroecological product, an underdeveloped market, low demand, a low standard of living, high costs of control and certification are just some of the many problems that farmers and costumers in Serbia are facing\(^9\).

2. Initiative analysis

In the next pages the initiatives selected will be analysed.
Special Nature Reserve Zasavica

Contact details:
- Phone: +381 22/614-300
- Address: Svetog Save 19, 22000 Sremska Mitrovica
- Website: http://www.zasavica.org.rs/
- Email: zasavica@zasavica.org.rs

General description

Located in the Sremska Mitrovica municipality (Serbian province of Vojvodina), Special Nature Reserve Zasavica was accidentally discovered by Slobodan Simić, a president of the Nature Conservation Movement of Sremska Mitrovica (the oldest non-governmental environmental organization in Serbia) 23 years ago. Nature Conservation Movement of Sremska Mitrovica became the first NGO in our region which was given to manage protected property and natural state good of first category with the cooperation of local people. Thanks to their good example, today there are several other NGOs that have gained control over protected areas. The main objectives of the initiative are empowerment of an underdeveloped and neglected region for which the initiative provided electricity, water, cycling routes and jobs; economic security of present and future generations; nature conservation; natural habitat protection; promotion of good agricultural practices; protection and conservation of natural resources; preservation of traditions and old varieties; promotion of health and knowledge.

Focusing on the topics such as biodiversity, animal husbandry, traditional breeds and sustainable development, the initiative is gathering many actors, including NGOs, local community, universities, and research centres.

What we can learn?

The Special Nature Reserve Zasavica improves the knowledge regarding sustainable tourism development, awarded with the award “White Angel” by Federation of Nature and National Parks of Europe. The initiative provides relaxation, recreation, sailing, birdwatching, fishing, observing and studying of nature, photo safari, the possibility to study inter- and intraspecific relations, interactions of biotic and abiotic factors. The initiative encourages the exchange of experiences about rare and endangered traditional breeds, their growing and biodiversity management with all actors and interested parties.
Positive impacts

An ecosystem Zasavica is providing habitat for 655 plant species (including endangered taxa of Serbia such as Aldrovanda vesiculosa, Hippuris vulgaris, Ranunculus lingua etc.), 19 fish species, 182 bird species (some of which classified as SPEC1) and around 65 species of mammals. Education and training regarding the biodiversity and ecosystems are provided for elementary and secondary schools, Faculty of Agriculture in Belgrade and Novi Sad, Faculty of Biology, etc. along with the workshops and education for farmers.

The initiative invested their funds in procurement and installation of wastewater purification machine that naturally process wastewater from all facilities, using the sand, cane, plants and gravel. The initiative is aiming to achieve energy independence, and invest future funds in solar panels. Zasavica possesses two electric vehicles (road freight and passenger vehicle).

The initiative has collaborations with other NGOs, universities, research centres, and academies of sciences in Serbia, Montenegro and all countries of the former Republic of Yugoslavia. The initiative is the only one which successfully conducted reintroduction of beaver in Serbia, as well as Mangalitsa breed of pig which was vanished from Serbian territory. Zasavica implements the conservation of Podolian cattle, which is considered as endangered species. The initiative is a leader in the region in production of products from donkey milk. The initiative collaborates with Roma and women from the local community and provides education related to the development of mini-entrepreneurship for women and single mothers.

Limitations

Low purchasing power in Serbia is disabling complete economic sustainability and independence of Zasavica. Therefore, the initiative must rely on subsidies and projects which vary from year to year.

There is a shortage of available and trained workforce in the livestock sector in the region, since the initiative is strictly dedicated to employment from the local community.
General description

Grujičić family has been engaged in farming for several decades. Mr. Radosav (known as Lale) and his son continued this tradition and in 2010 they transitioned to organic farming. The farm is located in Western Serbia and cultivated by Mr. Radosav, his wife, son and daughter-in-law. They cultivate around 20 ha of land, of which 16 ha is certified organic production (4 ha plums, apples, blackberries, raspberries, strawberries, blueberries, cranberries, currants, and since 2019, 0.3 ha of vineyards, 2 ha are vegetables, while other areas are grown in cereals, meadows and pastures).

Grujičić farm is also engaged in animal husbandry and raising cows, sheep, mangalitsas, chickens, turkeys and ducks for production of the cheese, kaymak, eggs, poultry and meat. The animal feed is mostly from the farm and produced manure is used in organic production. Therefore, the farm is predominantly independent from external inputs, and animals as well as crops are healthy and resilient all year around. Grujičić family considers most of their costumers as friends, since they sell their products mainly from home or in the Belgrade organic market, in order to keep in touch with their customers.

What we can learn?

The organic farm Grujičić offers way more than healthy goods that we can purchase on their farm. The long family tradition in agriculture, care about the environment, human needs, and hospitality of the Grujičić family resulted in love and respect of people all over Serbia. This is one of the few sustainable farms in Serbia, which combines plant production and animal husbandry. The farm also welcomes families with kids who can play with the animals, students who want to work and anyone interested in learning the family’s farming lifestyle. Wherever you meet Mr. Lale, either in his region or in Belgrade market, he will give you his products to taste, invite you to his house and show you the results of his fruit analyses that he is very proud of. Aware of the fact that households like his are very rare, Mr. Lale says that it gives him strength to keep going and make people understand the values and benefits of organic farming.

Organic farm Grujičić

Contact details:
Phone: +38114481417
Address: Pambukovica 1421
Website: http://www.organikfarma.com/
Email: laleorganik@gmail.com
Facebook: /organikFarma/
Positive impacts

Grujičić farm collaborates with NGOs, the University of Agriculture, and advisory and extension services of Valjevo. Ms. Snežana Ognjenović brings the attendees within the educations dedicated to organic farming and gardening. Serbia Organica organizes excursions and visits to Radojčić farm with farmers from regional countries. Novak Đoković Foundation organizes the touring of the farm for preschool children and Mr. Lale participated in making of the raised beds for vegetables in kindergartens and teaching kids about organic farming within the activities of the mentioned foundation.

The manure used is originally from the farm. Composting is a regular on-farm practice and all plant residues are saved and later incorporated into the soil. Crop rotation is an obligatory practice, as well as intercropping, as often as possible. Soil cultivation is done when the moisture content is adequate, with minimized number of passages in order to prevent soil compaction. Water is used from the artesian well.

“Organic farming is nothing but the continuation of the tradition and agricultural production of our ancestors.” Radojčić farm uses and promotes indigenous varieties and all animals are free range and originally from our region.

Two local Roma families are working on the property seasonally. Their children are with them and they go to school from Radojčić farm. Mr. Lale is proud to say that those families understand the importance of organic farming and love what they are doing.

Limitations

“It is hard to say what the challenge is”, Lale explained. He believes that organic agriculture is like serving a cause greater than yourself, since many children are raised eating the organic food and many cancer patients are seeking the cure in his products. “To surpass that, is a real challenge!”

Mr. Lale believes that subsidies are not the solution, but healthier economy and higher purchasing power of people in Serbia.

“Local government has no understanding for this type of production. If export of organic products was lower, people in Serbia would be healthier, more organic farmers would emerge and overall ecology in Serbia would be better!”

“It is discouraging when you hear a statement of one doctor from the Faculty of Agriculture, claiming on the national TV that there is no difference between organic and conventional products, when the same doctor came few years before and took samples which showed much higher percentage of nutrients and vitamins from organic products.”
Women's Rural Network of Vojvodina

Contact details:
Phone: +381216361907
Emails: office@zelenamreza.org

General description

Women's Rural Network of Vojvodina is a network of civil society organizations and associations. Located in Novi Sad (Vojvodina), the network counts 17 members, mostly women's associations, organic farms and associations that are not registered as women's but mostly have women as members. The process of gathering women and women's organizations began in 2015, and in 2016, an agreement on association and common goals was signed, with support of the umbrella organization Green Network of Vojvodina.

The objectives of the Women's Rural Network of Vojvodina are participation in the processes of rural development of Vojvodina that affect the position of women and young people in the area; establishment of the cooperation at the local, provincial and republic level in order to participate in decision-making; implementation of good practices that will contribute to the socio-economic empowerment of women and young people in the countryside; improvement of the knowledge of women and youth in the countryside through education; establishment of dynamic rural environment in Vojvodina in which women and young people actively participate in creating a sustainable future in which both women and men have equal opportunities.

The main topics the network is focused on are socio-economic status of women in Vojvodina region, equity and education. The initiative is organizing trainings, and awareness raising campaigns for women, as well as alternative markets where they can sell their locally grown products without middleman. The initiative plans to provide the education from the field of information and communications technology, so the women from rural areas can use the modern applications, promote their work, share the information and have better access to the market channels.

What we can learn?

The Network is raising the awareness and knowledge regarding the women’s rights, position of the women in the village, importance of local sale, organic agriculture and preservation of traditional customs and knowledge. Non-formal education is conducted with a focus on sustainable agriculture and rural development, under the motto “When the woman in the village is happy, everyone around her is happy!”
Positive impacts

Ever since it was founded, the network has been providing non-formal education related to organic and sustainable agriculture. The network is promoting organic agriculture and agroecology and with the support of EU they published the book/manual “The wonderful world of organic agriculture”, along with the brochures promoting the organic farmers of Vojvodina. The initiative is focused not only on education of farmers, but also consumers, emphasizing the health and environmental benefits of consumption of organic products.

The initiative founded organic Farmers' market "My Farm", which was gathering traditional smallholders from the region and providing them direct access to the market. Moreover, the long-term education of the farmers was conducted regarding agroecology, renewable energy resources, marketing and promotion. "My Farm Market" was the greatest distributive center of organic produce at the time with the slogan "Organic agriculture. Good for you, good for nature!"

Women's Rural Network has excellent co-operation with similar organizations in Albania and Kosovo, and participates in exchange of information between countries. The network encourages the exchange of good practices with the countries from the region, and cooperates with other NGOs within the country. The Network is a member of the Vojvodina Initiative for EU, and in charge of Chapter 11 related to agriculture and rural development. The Women's Rural Network conducted the surveys which showed insufficient knowledge of women regarding EU and CAP, which was improved with ongoing education of farmers and citizens.

Limitations

The lack of cooperation with the city of Novi Sad, due do change of the government, which abolished the ten-year-old Farmers' organic market "My Farm" in 2015, and disapproved the lease of retail space, which resulted in closing of the market. The network does not have the opportunity to gain the fundraising by the government of Novi Sad, since organizations are frequently viewed through a political prism which also resulted in a decline of organic production during last years.

The current market situation is not satisfying, since certain farmers sell non-certified products, and not all consumers have the access to verified and certified producers. The problem is also the low purchasing power of people.

The Network is emphasizing the urgent need for education and building the customers' confidence regarding the agroecology and organic produce. The main customers are educated people, people with young children on certain health problem.
General description

The ecological movement "Frame of Life" is based on the foundation of the previous organization "The Ecological Association of Mionica", which has organized the first exhibitions of old varieties since 1998 and whose numerous members have remained in the ecological movement "Frame of Life". In 2013 Frame of Life association was officially formed, along with the Museum of Rocks, in cooperation with the Geosciences and Faculty of Mining and Geology.

Located in the Paštrić village (Kolubara District, western Serbia), the work of the initiative is divided into 3 sections which include geodiversity, seed bank with indigenous species and conservation of wild biodiversity.

The work of the organization is conducted as a combination of science and the application of scientific knowledge in the field conditions. Main actors are experienced farmers who are enabling the realization of seed bank section and who are cultivating the old varieties in the field; professors and assistants from the universities; professional grafters; researchers from the field of crop sciences, fruit and vegetable production. They all combine their knowledge in order to identify varieties, diseases, pests, etc. The members are also enthusiasts willing to grow traditional varieties, such as young people from the cities, with whom it is planned to launch a project to grow urban gardens with old varieties.

Main objectives of the initiative are the improvement of scientific knowledge regarding biological and geological diversity, popularization of scientific research, promotion of biodiversity and geological resources of Serbia, improvement of environmental protection, promotion of life in rural areas and attitude of local population to natural resources, education of civil society (especially children and young people) about sustainable use of resources, as well as public advocacy for changing habits regarding the exploitation of natural resources.

What we can learn?

The focus of the initiative is currently related to grafting, pruning education, and education of farmers regarding the techniques of building their own, local seed banks, how to store and exchange the seeds, and identify the seeds and plants they already have. The initiative conducts the education explaining how a seed bank works, methods to manage a personal seed bank, with an emphasis on sharing the knowledge and information.
Positive impacts

The initiative conducts trainings and educations which promote practices about soil properties and techniques for restoration of the soil fertility. The section which is dedicated to the preservation of the wild biodiversity conducts the research and field work in collaboration with other initiatives such as the Institute for Nature Conservation.

The movement created a seed bank “The grain” which is functioning as a living seed bank, is based on in situ conservational principles, with the goal to preserve indigenous varieties of fruits, vegetables and cereal (grain) species and prevent their disappearance. The initiative does not sell seeds, but rather connects different actors and farmers and encourages people to start growing old varieties and selling their products. The trainings aim to explain the potential and benefits of old varieties on the market, why these products should have a better price, and how they encourage rural development and tourism. The initiative is strictly promoting local production and local markets, where consumers can come directly to the farm and buy local food, rather than selling them at distant markets.

The initiative emphasizes that the representatives of the regions are their local communities, where old, traditional farmers, considered as a vulnerable group, play the significant role due to the greatest genetic resources preserved. The organization encourages their networking with other actors, exchange of knowledge and local preservation of the old varieties, as well as the involvement of young people who are interested in returning to the village in order to start their own production. The initiative enables networking between regions and social groups in order to provide easier access to all resources. As the part of their educational approach, the initiative promotes and organizes meetings, exhibitions, grafting schools, days for seed exchange, as well as research work, with the focus on characteristics of old varieties and importance of traditional knowledge, traditional gastronomy and cultural heritage.

Limitations

The initiative is facing a problem of intellectual property when it comes to local species, to whom the old varieties belong and who has the right to trade them? These issues have arisen since the old varieties should belong to the local community, which is not the case due to many omissions in the law.

The main problem is related to policies and regulations since old varieties are not sufficiently recognized. The Rural Development Strategy from 2014 have recognized the importance of the old varieties, however no monitoring is being conducted on the country level, the official database does not exist, nor the
strategy and the methodology for their preservation. When the local governments want to help and support the work of the initiative, there is no legal framework under which it can be implemented since Serbia does not have the national policies regarding the old varieties.

The initiative is also facing the lack of funding, since insufficient amount of money is assigned annually for all genetic plant resources in Serbia, and there is a huge number of varieties. Furthermore, available budget applies only to registered agricultural holdings, while numerous trees and plant varieties are placed in unregistered areas which should be also taken into account.

The initiative accentuates that they would like to be involved in strategies for changing policies; however, they do not have qualified people or experts from the field of national regulations and policies who can deal with this issue at the moment.

New legislations which will promote the growing of traditional varieties, along with the incentives and subsidies for farmers involved in their cultivation are needed.
"Agroecology and Environmental protection" is a bachelor program in one of the most reputable public Universities of Novi Sad, Faculty of Agriculture. The Agroecology and Environmental protection program has started in 2010, and lasts four years (8 semesters).

The Faculty of Agriculture also offers a bachelor program Organic Agriculture, master program Organic Agriculture which started in 2006, and joint Danube and AgriFood Master program (http://polj.uns.ac.rs/wpcontent/uploads/2015/10/066_501_Mastercurriculum_DanubeAgriFoodMaster_2015U. pdf). The program provides the education mostly in technical aspects (animal husbandry, beekeeping, plant production, soil sciences, sustainable agriculture practices, plant protection, biodiversity) and eco-environmental aspects (water conservation, renewable energy sources, basic principles of ecology, agroecology) of agroecology, while the separate bachelor programs are dedicated to rural development and economy.

How is the academic/traineeship done?

Like in majority of Universities in Serbia, the education approach includes most of the subjects which are theoretical, while in second, third and fourth year of studies there is practical work (field work; in agriculture companies; and organizational practice when students learn all aspects of agroecological farming systems).

The program is focused separately on different scientific disciplines (studying them in depth) without their integration, and students are expected to integrate acquired knowledge from different fields later on.

Positive impacts

The program is raising the awareness on agroecology and environmental issues through education. The publications and research work done in the university are promoting agroecology, organic and sustainable agriculture. Anyone interested in agroecology is free to attend lectures. In the collaboration of the faculty with NVOs and research institutes, students have the opportunity for internship or employment.
Limitations

Poor comprehension of three aspects of agroecology (science, practice and movement). The educational approach is not agroecological enough, it is more of a top down approach instead of bottom-up, and exchange of knowledge and improved networking between farmers and agronomists are needed. The university is focused to create the experts for big agricultural companies which are looking for engineers, instead of taking into account the needs of small family farmers.

What can we learn?

Program provides knowledge from the fields of agroecology and environmental protection, as well as detailed understanding and possibility of practical application of sciences in protection of agroecosystems and environmentally friendly solutions for pest control, pathogens and weeds.
General description

The Institute of Pesticides and Environmental Protection is a governmental research and development institute, founded in 1959.

The main objective of the Institute is scientific research in the field of plant protection based on the study of organisms harmful to cultivated plants and the development of sustainable methods of their control. One of the aims of the research is the rational use of pesticides, in order to reduce the amount of chemicals that are released into the environment. Ecotoxicological research is a special aspect of scientific research that is directly related to environmental protection and is associated with the negative effects of pesticide application (pesticide residues in soil, water and food; toxic and other negative effects on beneficial and non-target organisms, etc.).

How is the research done?

The Institute cooperates with other scientific institutes and research centres related to agriculture and food production, mainly with the Faculty of Agriculture of the University of Belgrade and the University of Novi Sad, as well as several other universities and institutes abroad. The cooperation is mainly carried out through the joint participation and collaboration in numerous research projects.

Plant protection and ecology are regularly integrated through precisely defined research tasks within every scientific project.

What can we learn?

The institute provides the opportunity for young scientists and researchers to publish their work in prestigious scientific journals. Along with information about the latest achievements from the field of chemistry and agriculture, and educations which promote crop protection and environmental protection as compatible and complementary disciplines.
Positive impacts

In the past ten years, the researchers of the Institute have published over 1000 scientific results (monographs and other publications, scientific papers, press releases at scientific congresses). On the occasion of the 50th anniversary, in 2009, a more extensive publication was published about the development of the Institute, along with a bibliography of scientific papers. The institute is also publishing a scientific journal *Pesticides and Phytomedicine*, focused on pesticide toxicology and ecotoxicology, phytopathology, applied entomology and zoology, herbology, protection of plants and food products.

Limitations

Insufficient and inadequate governmental state support in strategic terms. A broader social problem is the diminishing interest of young generations in a career in science.

3. Bibliography

4. Acknowledgements

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Spain
Agroecology initiatives in Spain
Sergio Sánchez Taboada, Javier Asensi Moya, David Navarro-Miró

1. Current state of agroecology in the country

1.1. Background on current state of agroecology

In the Spanish state, agroecology was practiced before the concept had been defined. Throughout the country, peasant experiences survived that were kept apart from agricultural intensification, maintaining traditional agricultural systems and management. At the same time, new pioneering initiatives appeared that adopted the model of organic agriculture and some grupos de consumo [1] (i.e. group of consumers who contact directly with producers and place joint orders), began to be formed.

Agroecology first became known in Europe at the end of the 1980s, in Andalusia (southern Spain), with a strong social and political bias that would have a great influence on its subsequent practical development and its definition as a scientific approach. It was therefore born out of the evolution and encounter between the laborers’ movement and the environmental movement, in a process that also incorporated the participation of a group of social scientists and that quickly became linked to the peasant movements in Latin America [2][3].

These confluences, so unusual in the context of the time, made it possible to lay the foundations of an alternative for social and environmental sustainability at a critical moment, when the effects of the industrialization of agricultural activity and the international economic crisis were beginning to be felt [2].

The close collaboration between the Instituto de Sociología y Estudios Campesinos (ISEC) [4] and the Sindicato de Obreros del Campo (SOC) [5] is one of the keys that best explains the militant commitment of academia and its decisive contribution to the emergence of agroecology.

At the beginning of the 1990s, a number of summer courses and seminars were organized to introduce agroecology into the subsequent doctoral and master's degree programs that have been offered since then in Andalusian universities. In these studies have participated students from Spain and Latin America and have helped to disseminate and expand the agroecological academic knowledge [2].

During the following decades, agroecological production and consumption projects multiplied, in a process supported by some agricultural and environmental organizations and NGOs. These organizations articulated the first struggles against GMOs and free
trade agreements and participated in the international meetings of La Via Campesina, where they assumed the responsibility of spreading the message of Food Sovereignty.

The financial crisis of 2008, the cuts in social rights and the increase in economic inequalities, derived in a crisis of democratic legitimacy of the institutions that configured a new scenario of social conflict and political instability. The intensity of citizen mobilizations (e.g. 15M, PAH, Mareas, etc.) stimulated the emergence of numerous urban (grupos de consumo, urban gardens, etc.) and neo-rural (i.e. young people returning to the countryside to undertake productive projects) agroecological initiatives that make the movement grow.

1.2. Agroecological state of the country

Agroecology in Spain is usually understood as a grassroots social movement, in defence of the principles of Food Sovereignty, with a clear demand for social justice and an important political content. The new productive projects, which find an alternative to the neoliberal model in agroecology, try to confront the widespread situation of precariousness by assuming a considerable work overload. The dispersion of these initiatives throughout the territory makes their articulation difficult, reinforces their isolation, and in many cases limits the possibilities of achieving sufficient economic viability for them to consolidate. Moreover, they do not have their own organization to defend their interests at State scale, with the capacity to represent them at the negotiating tables, or to have a political impact on the institutions.

At the other end of the food chain, since 2000, the grupos de consumo have been involved in a major expansion process which, ten years later, has come to a standstill, although they are still the most common form of the short food supply chains (SFSC). In order to overcome the difficulties present in this model, which is so demanding in terms of voluntary work, in some cases an attempt has been made to professionalize management and follow the example of the pioneering consumer cooperatives, which managed to consolidate and grow over time [6]. For their part, community supported agriculture formulas (i.e. CSAs) are still in a very small minority in Spain [7]. More recently, some cities are beginning to experiment with new formulas for developing SFSCs, such as cooperative supermarkets.

On a political level, the emergence of new political parties has allowed local institutions to open up, which in recent years has provided a unique window of opportunity for the development of agroecology on a local scale (local markets, school canteens, food strategies, etc.), diverting a significant part of the resources, knowledge and energy of social movements towards providing technical advice to institutions. In this context, the adhesion of the first cities to the Milan Urban Food Policy Pact [8] and the creation of the Agroecologic Cities Network [9], marked a turning point that has been a great challenge for the agroecological movement and its relationship with the public authorities.
1.3. Regions where agroecology is more developed

Although key informants do not always coincide, the sources consulted identify some territories with greater agroecological development, such as Catalonia, the Basque Country, Valencia, Andalucía and Madrid, and others where it is more difficult, such as Castille-La Mancha or Castille and Leon.

There are many different factors that explain the imbalance in the possibilities of agroecological development in each region, such as the concentration of a younger population, industrial and economic development, the presence and consolidation of social movements, the tradition of association, the agrarian structure, or the historical and political trajectory. The particular combination of these factors is what determines the casuistry of each territory (large estates in the south, industrial development in the north, etc.) generating a more or less favourable context for change. Furthermore, it is observed that where the confluence of active social movements, consolidated experiences of agroecological consumption, and support from the institutions is possible, the evolution is much more remarkable.

1.4. Citizens and civil society awareness of Agroecology

The growing social concern for the environment and healthy food has been taken advantage of by conventional distribution channels to supply this new market niche, to appropriate agroecological concepts such as local production or sustainability, and to foster the confusion that allows them to increase the profits of the certified organic food industry. Civil society, mostly urban and affected by the economic crisis, disconnected from the rural and agricultural reality, lacks the necessary knowledge to distinguish the forms of production or origin of food, and prioritizes prices or comfort of access.

Although this form of uncritical consumption abounds, efforts are being made to incorporate a viewpoint of social justice to counteract this trend and increase the transformative power that can be exercised through the development of a new culture of consumption that is more aware, supportive and responsible.

1.5. State of art of agroecology at the decision-making level

In recent years, agroecological public policies have been developed in some important municipalities (e.g. Zaragoza, Valencia, Madrid, Barcelona, etc.). New urban food strategies have been designed with significant social participation, and some progress has been made in public procurement (mainly in school canteens), consumption awareness and SFSC. However, difficulties have been observed -in the articulation of the productive sector and in the limits of municipal competences- which require the extension of the territorial scale, involving the administrations at higher levels (Councils, Autonomous Regions, State).
This leap in scale could reinforce the many municipal agroecological markets that have been established, since the greatest difficulty encountered is balancing the concentration of supply and demand, and their distribution in the territory.

Despite some exceptions (e.g. Diputaciones de Córdoba and Valencia, Consell Insular de les Illes Balears, Government of the Canary Islands), the lack of support from regional institutions is one of the major limits to the leap in scale of agroecology. Furthermore, the agroecological movement has not yet managed to have practically any impact on the State’s public policies, which is where the agroindustry lobby has the most influence. In fact, the general framework of many of the State’s agrarian policies continues to benefit intensive methods and harm the agroecological peasant agriculture model.

### 1.6. General Challenges / Limitations

The most obvious difficulty for the development of agroecology in Spain is in the European framework of the Common Agricultural Policy (CAP) and its specific application in the territory, which does not contemplate the particular needs of small-scale production and produces a situation of inequality that harms the viability of agroecological projects, since the current legislation that applies to production (seeds and seedlings, traditional varieties) and to the artisanal food production (cheese, preserves, etc.), demands the same requirements as for any large industry. Furthermore, at administrative levels higher than the municipal level, it is more difficult to overcome resistance to political and socio-economic change posed by agroecology and Food Sovereignty.

The lack of official recognition of agroecological production prevents reliable censuses of these initiatives, or agreement upon criteria and indicators that allow them to be clearly distinguished. Many are not certified as organic, and much of the certified production does not comply with the principles of agroecology. The precariousness of the beginnings and the particularities that prevent compliance with the legal requirements for legal recognition, keep many initiatives hidden, outside the system, and without access to resources or aid.

The demographic imbalance concentrates most of the population in the cities and keeps the countryside depopulated and aging. There are few opportunities for generational change and the incorporation of young people into agricultural activity, and the added discrimination faced by women is particularly detrimental to their development possibilities in this context.

The globalized food system and the dominant urban culture impose increasingly uniform living and food consumption habits that are far removed from the rural and agricultural world.

The context of economic crisis extends social inequality to the areas of production and consumption, making it more difficult to establish distribution channels with fair prices for both parties.
The cultural differences (of symbolic codes, habits and languages) that exist between the people, institutions and organizations involved in the agro-food system, make it difficult for the parties to understand each other when it comes to forming networks and establishing alliances to advance in the leap of scale. In addition, prejudice and mutual distrust make it difficult for political and institutional power to relate to grassroots agroecological organizations.

The imbalance of power and inequality means that most of the advances in agroecology and their impact on public policy are led by the urban and consumer middle classes. In shared spaces, it is still necessary to strengthen the presence of the productive sector and facilitate its participation by adapting methodologies and formats to their specific needs.

1.7. Social Movements

In Spain there are many small groups of people working for agroecology with an open, participatory, decentralized and horizontal vision to achieve Food Sovereignty, giving rise to interesting initiatives such as the Red de Semillas Resembrando e Intercambiando [10], the Plataforma por la Ganadería Extensiva y el Pastoralismo [11], the various Alliances for People’s Food Sovereignty, the Intervegas Network [12] (for the conservation of fertile soil), or the European project HNV-Link [13] (innovation for the maintenance of high natural value agricultural systems), among others. In some regions, agroecological social movements have achieved, after many years of struggle, public policies favourable to agroecology. However, many of the initiatives come from urban groups, are disconnected from the rural world, and do not adequately consider the vision and needs of the producers. The disagreements and tensions between production and consumption, and the prejudices towards other less ideologized collectives, increase the distance and mistrust towards institutions or conventional agriculture, and make it difficult to incorporate them into the movement.

For the moment, the most strategic and consolidated alliances of the agroecological movement are those established with the social and solidarity economy networks and the feminist movement.

1.8. Agroecological Practices

From agroecological production there is a common vision of conserving biodiversity and reducing environmental impacts, improving soil conditions, reducing the use of inputs and tillage. But there are few institutions that offer specialized technical advice for agroecological production, which usually resorts to self-learning through experimentation, consultation with other producers, reading, internet, etc. The horizontal and informal transmission of knowledge and information in networks (Red de Semillas, Ganaderas en Red [14]) acquires great value in this context. In many cases, there is no integration of agriculture and livestock, so it is necessary to transport manure from the nearest livestock farms, or to use companies specializing in the production of organic
fertilizers. In recent years, some farms have begun to experiment with green manure and the cultivation of microorganisms to improve soil fertility.

1.9. Alternative market and local product distribution channels

Four years ago, Spain was the European country with the largest area certified for organic production, but this area corresponded to only 3% of its farms. Most of the production was for export, and the annual *per capita* consumption of organic food represented less than 1% of total family food expenditure, with short food supply chains distributing between 35% and 50% of total sales of these foods [7].

Although Spain comes from a cultural matrix and production structure unfavourable to agroecology, there is a growth in markets for local products and direct sales, as well as initiatives that seek to generate trust by bringing production and consumption closer together, such as Participatory Guarantee Systems (PGS). However, despite this trend, the presence of CSAs (i.e. mainly located in the Basque Country) still remains residual [7], as well as the purchase of products through SFSC, mainly in cities, where the bulk of consumption takes place.
2. Initiative analysis

Participative Guarantee System
Ecollaures

Contact Details:
Website: http://www.ecollaures.org/
Email: correo@ecollaures.org
Country: Spain
Region: Comunitat Valenciana
Pillar: Practice and Movement
Actors: PGS (Participative Guarantee System), Farmers and Consumers
Specific topic: Agroecological production, distribution and consumption

General Description

It is a Participatory Guarantee System grounded on the pillars of agroecology and food sovereignty. Its organization stems from the mutual recognition between projects and organizations involved in the promotion, production, regulation and the use and consumption of agroecological products and services, with a shared responsibility to guarantee the quality of the system.

PGS Ecollaures is a guarantee system between producers and consumers on first grade. It does not aspire to constitute an alternative for the conventional organic certifications, nor intends to cover agricultural organic production destined for the commercialization through intermediaries or wholesale markets.

Objectives

The system’s goal consists mainly on social transformation through the empowerment and accountability of both producers and consumers for the productive-commercial and consumption chain under an agroecological framework in the territory. PGS Ecollaures promotes a quality seal to guarantee:
- Local food production.
- Small agroecological producers.
- Short channels for distribution and consumption.
- Horizontal relationships between people.
- Land, biodiversity and local agricultural knowledge defence.
What we can learn?

The importance of cooperation and organization to achieve the empowerment of both producers and consumers under an agroecology and food sovereignty framework. The importance of the political approach of the agroecological producers' collectives for changing local policies.

The relevance of having in the initiative space to celebrate, get to know each other and how to work side by side in order to survive as a project.

The control of the food chain shared between production and consumption allows mitigating some of the difficulties associated with the commercialization of agroecological products, better adjusting prices, quantities and varieties of crops and allowing consumers to know more about the origin and the way in which their food is produced.

The most prominent goal that this initiative has achieved has been the understanding of what it means to be a collective, the processes taking place within it, its management and the subtle workflow necessary to keep everything together. In this regard, the group deemed it necessary to organize harmony-oriented meetings that promote the encounter and the discussion of themes usually disregarded in the general assemblies. A space to celebrate and get to know each other better, and to become aware on what the human group is, what it needs and how to work side by side in order to survive as a project.

Positive impacts

Active participation in other projects, collectives, etc. For example, CERAI, schools, and other actors have reached out to PGS Ecollaures to organize countryside guided visits, talks and school activities... This has always constituted one of the key pillars.

Anyway and mainly due to lack of both economic resources and time, the ones pushing forward the projects have always been the entities integrated in PGS Ecollaures, such as CERAI or Per l'Horta [23], as producers, time is scarce.

PGS Ecollaures is constantly viewed as a referent and an example to follow. They have been present in the negotiation panel for the market in Valencia's main plaza and have been active members in the elaboration of the normative for fresh and local products issued by Valencia's City Council.

Whenever any member is sick the group is informed and, if the discontinuation of his or her productive activity is justified, he or she is supported and helped by the collective to the best of its options.
The percentage of sales is referenced to the distribution distance, in order to ascertain if proximity is really worth economically or if there exist an obligation to sell in far away places. They so portrait "what's happening". This conforms a guide useful for self-evaluation. Each member also informs on non-satisfied necessities, which are in turn undertaken by the group as far as it is feasible.

The PGS practically covers every category within this dimension, including positive aspects and limitations. It is also important to note that each project within the PGS works differently (but always adhering to the minimum principles of acceptance).

**Limitations/Challenges**

There are virtually no savings nor reinvestment in the activity, which is in itself quite complex. Nowadays those performing agroecology have started recently, and there are neither schools nor referents. Framed by a system designed for long-scale distribution platforms, it is extremely difficult to obtain enough profit to live on and reinvest.

PGS Ecollaures has to make a great effort in the promotion of initiatives without a direct economic impact. If a minimum economic wage is not achieved, the activities, even if those with a high social benefit, are still hard to carry out.

Each projects' reality is different; for example, if the project is located close to Valencia, it is usually easier. Those producers located further away from the city face more difficulties in the distribution. This conditions them to distribute on a lesser frequency, and to put a great deal of their attention on the orders (if something is forgotten or goes missing, it may not be plausible to come back for it).

PGS Ecollaures is invited regularly to recently created markets, although in most cases the offer is declined due mainly to lack of time and the fact that, focusing on fresh product, it is risky to access recently created markets with absolutely no guarantee on either the number of participants nor the sales volume. The high workload behind the product in offer must be taken into account: harvest, preparation, transportation and installation, besides the tax on the stalls and the losses created by insufficient sales volume (which in turn generates food waste). That is why PGS Ecollaures does not usually participate in these new markets.

The PGS constitutes a novel relationships model that gathers people with quite fixed behavioural patterns. This results in difficulties to reach agreements in general assemblies, for example. Another very important issue is how a self-managed and horizontal proposal is legitimized as a
Sindicato Labrego Galego – Comisións Labregas

Contact details:
Website: http://www.sindicatolabrego.com/
E-mail: prensa@sindicatolabrego.com
Facebook: /SindicatoLabrego/
Phone: +34 981 554 147
Country: Spain
Region: Galicia
Pillar: Practice and movement
Actors: Peasant Farmers
Specific Topic: Food sovereignty, gender equality, feminism, self-management, family small-scale agriculture.

General Description

The Sindicato Labrego Galego - Comisións Labregas (SLG-CC-LL) is a peasant's organization that works very actively in the defence of the social, economic, professional and cultural rights and interests of agricultural-based populations, aiming to achieve a sustainable and endogenous development in Galician rural areas. Its internal organization is based on the very explicit principles of democracy, independence, self-management, peasant-sorority, and Galician (and worldwide) working class rights.

It constitutes a reference for the National Food Sovereignty Movement. It is part of the European Coordination for Via Campesina (CE-VC) and of the Coordination of Farming Organizations (COAG).

Its organic structure includes Women’s and a Youth’s Secretariats, several working areas based on different kinds of production, and diverse specific working groups, such as the one devoted to Agroecology.
Objectives

- Achieve professional, cultural and economic development of Galician peasants, particularly those who belong to the organization.
- Achieve a farming model based on food sovereignty, understood as the right of peoples, states and state coalitions to decide their own food and agricultural policies, avoiding “dumping” against third countries. A model with sustainable agricultural practices and based on Galician family farming exploitations.
- Re-value rural areas, taking into account their principal holdings: people and natural resources.
- Achieve real gender equality, including the equal or shared ownership of agricultural exploitations.
- Develop the necessary programs and social services to achieve all of these goals.

What we can learn?

In a very hostile context, where the economic and political powers pose a constant and oversized threat, the peasantry has been able to self-organize and build a formal and independent structure. The peasantry has proved itself able to resist all of the transformations, which have taken place throughout the decades, and to offer a democratic, solidarity-based and participation-open refuge for the inhabitants of rural areas, who have historically been considered as a drawback or an expendable element. This way, the Sindicato Labrego Galego offers a praiseworthy practical example for the defence of the values of the peasant Galician culture, which obey a totally opposed mindset than that hegemonically adopted (thus oftentimes they are ill comprehended). With more practice than theory, and more experience than speech, the SLG holds fast against the constant challenge of putting the peasantry much stereotyped image, filled to rim with misery and underdevelopment, into question. And it proves to be at the head of nowadays society in the exercise of such actual and modern practices as feminism and sustainability.

Gender equality

Even though the organization has worked in this respect from its very origin, it was between the period of 2002-2012 when parity was finally included in its statutes, generating a fixed structure with specific offices and an annual permanent, cross-cutting and gender-based program that includes every land aspect.

The Secretaria das Mulleres offers a common space for women and allows them to work on definite processes. The different levels and phases of participation are followed upon the incorporation of any women to the organization. This conveys the collaboration of every female comrade, who are encouraged to work to the full range of the capacities that they can bring to the organization.
They have also created a dynamization (female) group, who gather each two months and are constantly improving their skills on gender equality. Its function is to dynamize the different regions within the territory.

Since 14 years an annual Women’s Meeting has been summoned, which lasts for several days and revolves around an actual theme, promoting a joint reflection through debate and specialist’s consulting. This thus results in collective learning through common-interests discussion and the adoption of consensus agreements that improve the cohesion of the group.

This activity offers an extraordinary chance for women to surpass quotidian spaces, get away from reproductive chores and free themselves from the habitual routine of the family home. It highly generates life-impacting and personal-growth experiences, intense and deep and revolving around different knowledge areas.

The Meeting is itinerant, in order to ease the participation of those women for whom it is most difficult to travel, and to get a better understanding of the diversity of situations, difficulties, threats and problems, as much as potential and endogenous values, alleged to each area. It also connects rural and urban spaces, resulting in a highly enriching exchange. Besides, it offers a recreational, coexistence-promoting and cultural space (shows, plays, etc.) and incentivizes the generation of self-managed networks among the female participants, increasing the information flow for the formation of self-developed criteria, for the strengthening of self-esteem and the empowerment.

Alliances with collectives, platforms and feminist local and regional organizations in the Worldwide Women’s March in Galicia allows an encounter between rural and urban women and a mutual and very positive enrichment, sharing experiences, knowledge and issues between people with very diverse origins.

The SLG’s participation within La Via Campesina has allowed the development of a global campaign against gender violence, thus overcoming the resistance of some organizations (which used to legitimize violence against women). It also enables its collaboration in different European projects that work on diverse and interesting themes and experiences such as: health and hygiene norms, short commercialization channels, artisanal food production transformation, multifunctional shared traditional workshops, mobile slaughterhouses, etc. And it engages peasant in shared analysis on the Common Agricultural Policies from a gender equality perspective.

Positive impacts

The SLG does not identify with the social exclusion usually thrust upon Galician peasantry. It appreciates the diversity and values brought to both land and general society by different projects. This diversity richness is a necessary condition to achieve a Good Life, but it cannot be measured adequately if we limit our analysis to just observing economic indicators dictated by the markets. It cannot be truly appreciated from a reductionist,
economistic and productivist angle. For the same reason, the dimensions, categories and indicators of analysis, established in our methodology, are not adequate to explain the peasant logic of the SLG, whose holistic vision emphasizes the interrelation of the elements that creates a complex system.

Under this approach, the SLG brings together peasant and rural populations who wish to find their own voice, prioritizing their own values, criteria and necessities, while also offering support in finding new formulas that promote the much necessary economic viability of agricultural endeavours. It also conforms a structure that allows direct interlocution with the Administration and establishes a meeting point for the collaboration in the aims of different rural and urban Galician social movements.

Participation in decision-making processes in internal affairs is one of the key aspects that facilitate peasantry’s empowerment.

Gender equality is a basic and cross-cutting action axis, which is developed in all of its dimensions and unlimited to a specific area of the organization, given that the organization carries out a permanent analysis on the effects that the internal decisions and the external factors have on women’s lives. Counting with a formal and exclusive group just for women in the internal structure is considered of capital importance. The Secretaría das Mulleres is thus conformed as a secure and reliable space in which women can express themselves, reflect, diagnose and propose new self-detected necessities and measures.

In order to promote new generation’s incorporation to the agricultural activity and prevent generational shift from stopping, it also includes a Secretaría da Mocidade, which unites the youngest members of the organization.

Limitations/Challenges

Administration’s agricultural policies result in value grabbing benefiting the food industry, which sets very unfavourable prices for the peasants, who in turn are driven away from their traditional land, disowned and forced upon worse working conditions. One of the biggest challenges consists in taking the current aging of the rural population to a halt and preventing youth emigration.

In Galicia, land management has transformed large territories with high agricultural value in eucalyptus forestry plantations and has also introduced food cultures in places that were not apt for cultivation, thus producing enormous losses in harvests. Peasants also face another major threat: land grabbing by the extractive industry (mining, energy sector, etc.).
People with a higher political-administrative influence in the measures to be applied are tremendously ignorant of the rural realities and are currently in awe of the developmental and resource-predatory capitalism. This generates a constant feeling of frustration besides an exclusion model especially detrimental for women, who are affected both by the scarce employment offer in the rural communities and the strict normative frame the health and hygiene norms (thought by and for the food industry) impose, which excludes home- and self-made proximity production and prevents the access of peasant women to fundamental economic resources.

Long years were needed in order for the claims for a law on shared exploitation ownership to be accepted, and so far it has not been accompanied by public policies that make it come to its full potential.

Women are still considered by part of the administrations and of society as “side helpers” in agricultural exploitations, not contributing to the public health and working security system and without any decision nor representation capacity to engage in commercial operations (but always co-accountable for mortgages and other financial obligations), and responsible to a higher workload, both productive and reproductive. This results in a women’s right subsidiarity which aggravates their vulnerability against violence and inequality situations. Public administrations have so far shown no interest in its prevention, even though current legislations would provide a helpful framework.

The quantity of resources (economic and human) needed to cover the growing necessities of the sector and to keep the presence of peasants throughout the territory is simply huge. Bureaucratic and administrative paperwork is abundant, demanding and complex, and takes much of the energy and resources of the organization, limiting its scope of action.
Fundación Entretantos

Contact details:
Website: http://www.entretantos.org/
Email: entretantos@entretantos.org
Facebook: /entretantos/
Twitter: @entre_tantos
Phone: +34 983 374 567
Country: Spain
Region: National
Pillar: Practice and movement.
Actors: Researchers, private sector, universities, local administrations, extensive ranchers, agroecological farmers, technicians, local trade networks, conservationists, environmentalists, ecologists.
Specific Topic: Sustainable Food Systems, extensive livestock farming, collaboration, networks, social participation, action research.

General Description

The Fundación Entretantos is an organization that caters to the sustainable use of the natural resources, the conservation of biodiversity and the protection of the environment. It carries out a wide work of action research, well-known and valued for its capacity to facilitate dialogue and understanding through the design and conveyance of participation processes, labour networks and debates, and the exchange of ideas, experiences and different manners of collaboration between agents involved in land and resource management (institutions, universities, technicians, owners, managers, professionals or citizens).

Current lines of action

Sustainable Food Systems (Technical Secretariat for the “Red de Ciudades por la Agroecología” and agroecological dynamization of diverse projects and territories).

Geodiversity (participative research and collaboration management of World's Heritage Geoparc “Las Loras”).

Environmental Education and Social Participation (itinerant forum “Escuelaboratorio”).

Objectives

Create and strengthen connections between rural and urban territories, and bridge academic and communal knowledge, bring production and consumption closer, and the public policies to the necessities of the civil society, generate and strengthen cross-cutting policies that hold food as both a major priority and a backbone for the defence of everyone’s right to healthier and more sustainable food, and impulse Food Systems towards more open and agroecology-based models.

Support agroecological production and extensive livestock farming: promote sustainable practices and management in extensive livestock farming, and point out the role of the farmers in all of their activities.

Build mutual support and collaboration networks.
Promote social participation and gender equality in rural areas.
Balance environment and social sustainability goals.

What we can learn?

The convergence of people, organizations and institutions in common spaces and projects gathers a wide diversity of points of view, interests and priorities, thus demanding a fine management of numerous tensions, the construction of new bridges and the development of new and creative collaboration methods that allow the balance of different participations. Collective learning requires the development of long-lasting and integrative strategies that also include the voices of those usually underrepresented. This is a delicate and progressive work which requires both sensitivity and patience, but which will enable us to achieve valuable results as the self-esteem and the mutual trust of the parties involved increases.

The experience of Fundación Entretantos proves that, in spite of the intrinsic complexity of participation processes, these methodological tools own a very high potential to generate significant advances in the development of the social and political dimensions in agroecology.
Positive impacts

“Red de Ciudades por la Agroecología”
Counselling different institutions to design and implement Local Food Policies under an agroecological approach. The organization adopts a thematic axis each biannual cycle. 1st year: research and elaboration of technical reports; 2nd year: public campaigns, local and national.

This organization helps involved technicians to overcome isolation and solitude. It enables them to share doubts, worries, knowledge and resources revolving a common objective. It promotes mutual support and companionship.

It incentivizes local governments to fund these policies, which feel more legitimized for funding whenever they are made part of a more developed network, in which they can participate with tasks, responsibilities, work groups, etc. Also, it caters to other participants as the net grows. The bonds established with other cities and networks and the strategic documents approved by the plenum allow a higher level of resilience against changes in government's panels.

This organization holds Social Organizations as important, which were arranged in a Council a year ago, facilitating mutual support in case that the political willingness is diminished or that any other risk for the continuation of the project arises.

“Ganaderas en Red”:
Self-promoted initiative to facilitate and dynamize women livestock keepers nationwide, which aims to overcome discrimination and gender inequality and to generate social cohesion. Mutual support, overcome isolation feelings, exchange of experiences and reflections. Support and accompaniment to bridge the gap between the collective and other institutions, such as public administration, forums, events, etc. and to increase their visibility. Web and social networks: great social and media impact. Empowerment: they have achieved the complete development of the project and actively promote the incorporation of more women.

“Plataforma por la Ganadería Extensiva y el Pastoralismo”:
A common space in which people and organizations with very different profiles collaborate to support extensive livestock farming, in order to ensure its preservation and to make it more sustainable. Mailing list with a very intense activity in which all kinds of knowledge (CAP, animal sanitation, legal and normative documents, debates such as vegetarianism or antispecism, etc.) are shared.
Progressive increase in self-esteem, and attendance and confidence of the livestock keepers in common spaces (meetings, forums, etc.).

The Food Strategies and the Red de Ciudades por la Agroecología have achieved to increase influence in policies and to walk towards a social shift regarding healthy and sustainable food management.

In order to overcome the initial mistrust of the livestock sector, generated by the intervention of urban (or with more technical profiles) people and institutions, a constant work of bridging and dialogue has been carried out, with the objective of bringing the different parties together and to determine which are the most appropriate terms for a collaboration-based and satisfactory relationship.

Limitations

**Extensive Livestock farming area:**
- Discrimination, gender inequality: facilities ownership, labour taxes and labour rights, social-cultural context.
- Diversity in profiles, lifestyles, symbolism, practices and languages:
  I. There is a huge gap between women devoted to agroecological production (usually responding to a more urban or neo-rural profile) and those that practice traditional extensive livestock farming (with a more traditional vision and knowledge).
  II. The participation of the livestock sector in forums and common spaces is limited by several factors (internet access, timetables and schedules, etc.), which are not compatible with the working flows and manners usually followed by technicians.
  III. Likewise, technicians and environmentalists ignore the realities and details that influence practices and decisions adopted by the livestock sector.
  IV. Thus, rural inhabitants are prone to mistrust external (urban originated) interventions.
- Rural context: abandonment, depopulation, aging.
- Production traceability: consumers do not possess the capacity to discriminate between extensive and industrial livestock farming. It is highly difficult to reach the necessary consensus to define a national certification.

**Public Food Policies Area:**
- Food policies have traditionally been excluded from the local administration, given that City Councils do not have either resources, knowledge or experience in this field.
- The lack of producer coordination, the scarce economic viability of the exploitations and the limitations to land ownership impair the growth of the agroecological product's offer.
- Solitude and isolation: corporation technicians cannot share their concerns about food policies within their own City Councils.
- Food strategies consolidation: changes in governments pose a risk that generates uncertainty. They require an adaptation period.
- Methodology design of participation processes: to incorporate each actor in due time and in the best way, reaching the most useful agreements for every party, so that none feels excluded.
- Lack of critical mass: atomization of some sectors without common representative structures.

Challenges

**Extensive Livestock farming and Agroecology Area:**
- Motivate traditional producers to shift towards agroecology (web in development: http://www.pildoraverde.org/).
- Extensive livestock farming versus market-oriented industrial production, participation process to define a brand, certification or national seal that enables the clear differentiation pointing out when it is organic (or to which extent).

**Public Food Policies Area:**
- Increase sustainable food systems nationwide (supralocal structures: regional, autonomic, national), taking advantage of the current receptivity of some Administrations.
- Extend the Red de Ciudades por la Agroecología (Agroecologic Cities Network) to other towns and territories, including those which are small and rural.
- Organize and rearrange the agroecological productive sector.
Revista Soberanía Alimentaria, Biodiversidad y Culturas

Contact details
- Website: https://www.soberaniaalimentaria.info/
- Email: info@soberaniaalimentaria.info
- Facebook: /revistasoberaniaalimentaria
- Twitter: @RevistaSABC
- Country: Spain
- Region: Spain
- Pillar: Movement
- Actors: Universities, NGOs, environmentalists, foundations, agricultural unions, cooperatives, individuals.
- Specific topic: Dissemination

General Description

The magazine, covering the topics of Food Sovereignty, Biodiversity and Culture, is a publication for information, for debate and for reflection about everything that is known to condition rural life, agriculture and food. A magazine for critical thinking that aims to help imagine and build new social and economic realities in order to surpass capitalism.

Objectives

Generate discussions prioritizing agricultural and rural voices, which usually suffer an important bias on traditional (and even on many alternative) media.

What we can learn?

Undoubtedly, a large part of the reasons why this project has been maintained over time, overcoming numerous obstacles and difficulties, is related to its capacity to develop and consolidate alliances between very diverse people and entities.
This demonstrates that solidarity work in networks, under alternative organizational forms, allows tangible and lasting results to be obtained, keeping people at the centre. But at the same time, it requires having enough flexibility to adapt to the diversity of the work teams and the situations they face in each moment.

In addition, this experience has proved extremely useful in maintaining a continuous discussion on the key aspects to advance in Food Sovereignty in our country and in the world, from a critical and self-critical perspective, and with a popular and close language, rigorous but far from academic technicalities. And the importance of working on symbolic and cultural aspects, which allow to connect with the emotions of readers.

Great doses of creativity and networking have been fundamental for the survival of this project. Creativity in the sense of reinventing the classical concept of media (as many other independent structures do nowadays) and in the sense of offering new services to public Administrations and friendly organizations, for example on research (see the webpage), dissemination of the results of the actions, organization of events, etc. This view has allowed the support the magazine by public funding.

On the other hand, networks have played a key role: directly, given that the member entities finance the magazine (30% approximately) and indirectly, because they bring on new ideas to achieve economic sustainability, to raise awareness about the different territories, to get memberships of libraries, city councils, people and collectives, etc. These have been the two main reasons, together with the constant increase in memberships and collaborations with other media, which have made clear that such a publication is necessary.

Positive Impacts

The possibility to access different initiatives, debates, projects, collectives, etc., from other territories and even with other range of activities, with which it is necessary to establish networks (education, feminisms, social right movements, etc.).

Social and solidarity-driven economy criteria, such as liveable wages, compatibility, flexibility, caregiving, or team communication, among others, are included in the magazine. This has brought incredible growth to the project.

The magazine offers various examples and teachings to work in the construction of a more sustainable and fairer economy.

The possibility of disseminating debates, reflections and learning experience to a wide public.
Limitations/Challenges

Lots of social movements are fundamentally urban, thus making it difficult for them to reassess their strategies in order to include the primary sector and the rural environment. Another limitation arises from the fact that there usually are urgent tasks which need immediate tending, but that are not more important than collaboration relationships (which are oftentimes neglected).

It is an economically unstable and precarious project, which in turn hinders the achievement of the above-mentioned necessities (compatibility, flexibility, etc.) and forces the assumption of exceptions.

_Economy:_
The general precariousness of society makes it difficult for common people to subscribe or punctually donate to the group, even though the topics covered are of interest. This also happens when subscribing a membership for a consumption group or when buying from local producers.

Related to insufficient budget. The group would love to engage in other formats, such as audio-visual, but the economic budget impairs this new activities.
**Type of approach:** Students receive theoretical and practical training. One month of intensive theoretical training; one month of specific seminars, and four months of practice in active farms.

**Who is training:** Over 30 professionals participate in the traineeship, such as farmers, researchers, and other professionals from the sector (vets, technicians, etc…).

**Who is the traineeship for:** New entrance

**Objectives**
1- To guarantee the generational renewal in the primary sector
2- To advise and accompany the existing peasantry under an agroecological approach

**Topics covered**
To train future farmers with an agroecological perspective that integrates both technical knowledge (e.g. animal husbandry, product development, etc.) environmental, economic and socio-political dimensions (e.g. feminism, social and solidarity economy, cooperativism, assertive communication, etc.)

**How is the program/traineeship integrating different disciplines related to agroecology?**
It integrates scientific disciplines that are not closely related (for example, the course integrates ecology, agronomy and sociology).
Type of educational approaches
Teachers are facilitators and student knowledge is valued.

What we can learn?
The importance of traineeship for new peasants, who do not come from a peasant family, integrating theoretical and practical training.
The importance of including not only the technical, environmental, and economic knowledge, but also give relevance to the socio-political dimension.
The difficulties of the initiative due to the lack of funding and institutional support, even though the project has high rates of employability for new peasants.

Positive impacts
Facilitate access to the primary sector for people who do not come from a peasant family.
The training provides students with a sensitivity to the need to preserve natural and cultural resources. In addition, it also brings a cooperative vision within the social and solidarity economy to apply to its projects.

Some of the new farmers access land with few CAP subsidies. In this context, the training program gives them tools that may enable them to make a living exclusively on the revenue of their products, by valuing their products for their quality, closing cycles, etc.
The training gives greater visibility to the activity of women in the peasantry.

Limitations
The main limitation is the budget to carry out the formative project. Each year, the technicians of the project invest an important part of their time looking for funding and institutional support.

Even though the project has high rates of employability for new peasants (around 60%), another important limitation is the lack of institutional support.
Objectives

Research on agroecology, common goods and food sovereignty; Promotion and dissemination on agroecology, right to food and local and sustainable agroecological food systems; Teaching and research in postgraduate programs (MSc and PhD); Participation and promotion of social and institutional changes for agroecological transition.

Topics Covered

**TECHNICAL ASPECTS:** Agroecological transition in exploitations; guiding and dynamization of small-scale productive projects; support on collective culture planification; management of cultured biodiversity in agroecosystems.

**ECO-ENVIRONMENTAL ASPECTS:** Ecology-based management of natural resources for food and ecosystem services; Biocultural practices for the mitigation and adaptation to climate change.

**SOCIO-ECONOMIC ASPECTS:** Viability and sustainability of agroecology-related projects; Food sovereignty; Short food supply chains; Social Economy and Common Goods; Participatory Guarantee Systems; Peasant markets

**CULTURAL POLITICAL ASPECTS:** Urban agriculture; agroecological cooperatives; Revaluation of peasant knowledge and agricultural patrimony; “peasant to peasant” participation methodologies
POLICY ASPECTS: Producer's networks dynamization: agroecological transition of social consumption; Guiding and dynamization of public acquisition processes; design of local and regional agroecological strategies; right to food; municipalism.

Which stakeholders with: Farmers, social movement, NGOs, governmental bodies (to a lesser extent), local, national and international (especially Latin America)

Involvement of stakeholders: The knowledge, opinions, values, interests are discussed and feedback among different stakeholders and the researcher

Integration of different disciplines: 1) Different disciplines that are not closely related are used and their co-construction of the problem and tools used.

Type of outputs

Scientific publications

- Cuéllar-Padilla, M. y Ganaña-Fernández, E. 2018. We don't want to be officially certified! Reasons and implications of the Participatory Guarantee Systems. Sustainability 2018, 10, 1142; doi:10.3390/su10041142

Change of practices// innovation of practices

- Public procurement programs oriented to the acquisition of local sustainable food, from local producer's networks (Alimentando Cordoba project)
- Participatory Guarantee Systems adopted by local producer and consumer networks (SPG project)
- Transition in political and organizational culture (Escuela de Acción Campesina)

Proposition of policy briefs

- Conditions and requirements for public food procurement programs based on local and sustainable food (Alimentando Cordoba projects – at municipal and province levels)
AGROECOLOGY INITIATIVES IN SPAIN

- Public policies requirements to foster collective action in the agrarian sector in Europe – BOND project (H2020 project)
- Local recommendations issued by agricultural organizations towards institutions (Escuela de Acción Campesina)

Creation of social or civic network

- Networks of local producers; neighbourhood food stores; food aid programs, social organisations and institutions (Alimentando Cordoba project)
- Network for the development of public policies oriented to adapt the health and hygiene Spanish regulations to small- and medium-sized agroindustries and peasant holdings (BOND project)
- Network of Participatory Guarantee Systems at national level (support from the PGS project)
- Consolidation of a EAC pupil's Network and reinforcement of the National COAG Youth Coordination (Escuela de Acción Campesina).

Awareness between stakeholders about their knowledge, a situation of condition.

- Establishment of networks focused on agrarian unionism and other local and national actors (Escuela de Acción Campesina)
- Recognition of experiences and actors of different scale in artisanal and sustainable fishing (GT Pesca y Agroecología)

Limitations of the research group

- Lack of staff, precariousness and funding search
- Limited impact within the University of Cordoba

What we can learn?

The important and applicable knowledge that the research can provide when it is conducted with a participatory approach by militant academy.

The relevance of accounting for socio-political aspects in agricultural research. However, we also observe that this research approach has limited funding and institutional support, which limits its widespread adoption and academic recognition.
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Sweden
Agroecology initiatives in Sweden
Lukas Hallberg, Jorunn Hellman

1. Current situation of agroecology in the country

Swedish agricultural production of today is dominated by highly rationalized large-scale farming systems with low levels of complexity. A growing interest for alternative food production systems is however counteracting this, with initiatives taken towards small-scale farming and closer producers-consumer links. This trend follows the history of the movement of organic farming that emerged in Sweden in 1970-1980 [1]. Prior to this, a tradition of smallholder subsistence farming had a big historic significance in the 1800’s and early 1900’s, applying agroecological methods and principles before it was defined in its current form. During the second half of 1900’s, small-scale farms however diminished and practically disappeared with Sweden’s admission to the European Union in 1995 [2].

The concept of agroecology is relatively new to Sweden and started to be used in academic circles two decades ago [3]. The knowledge about agroecology and its principles is however still very limited, both among producers, extension services, policymakers and the public. The term “agroecology” is at large not used, not even by most producers or NGO’s engaged in alternative and sustainable food systems. A few exceptions to this are the organizations Nordbruk, SIANI and the Swedish Society for Nature Conservation, whom all actively use the concept of agroecology and promote its development. In academia, there are three universities involved in agroecology research and education. These are the Swedish University of Agriculture (SLU), Örebro University and Stockholm Resilience Centre.

The interest for sustainable production and consumption of food has grown remarkably over the last decades [4]. This is reflected in the growth of newly established movements and initiatives practicing agroecological principles, such as Community Supported Agriculture (CSA) farms, permaculture farm and training schools, implementation of small-scale agroforestry and holistic management, as well as university courses in agroecology. However, the agroecological producers, distribution channels and educational institutions make up a very small fraction of the total Swedish food production, market and agricultural training [3]. Due to the low occurrence of agroecology initiatives, it is not possible to highlight any specific region with higher activity in Sweden.

The greatest obstacle for developing agroecology in Sweden is the lack of knowledge and priority to the subject [3]. Organic production and vegetarianism are widely appreciated among the public, this is according to key informants often based on emotional positions and simplified assumptions on what is right and wrong. A large proportion of the Swedish population live in cities and lack basic knowledge about how food is produced and the actual differences between production systems throughout the food-chain. In this context, it has been convenient to propagate a defined and certified label of organic production as a sign of a correct choice, leaving little room to critically reflect about the nature of the production system or to differentiate one organic production system from another. Furthermore, a greater interest
to engage with agroecology is needed among researchers and extension workers to support the transition of production. To this day, no extensions service is providing advice specifically towards agroecology in Sweden. Another suggested approach to fill the agroecological knowledge-gap is to better integrate the subject in more educational programs at the SLU, specifically in early bachelor level. SLU is an important institution in Sweden that educates a large proportion of the country's agricultural professionals. Agroecology could also be included as a subject in agricultural colleges (upper secondary school).

In order to circumvent the consumer distance to food production, steps towards building relationships between producers and consumers are considered crucial [3]. This can be achieved by CSA or other market solutions such as the REKO-ring where intermediary retailers are removed, and the produce is sold directly from producer to consumer. Furthermore, the Swedish Board of Agriculture is a strong actor that could engage more in the issue to disseminate knowledge to producers and provide advisory services. The agricultural policies need a shift of focus away from production towards valuation and compensation of a wider range of ecosystem services to make agroecological methods economically and socially viable.

Prior to this study, there are no compilations or other published material that list and gather agroecological initiatives across different sectors in Sweden. Some organizations, such as the Permaculture association, have listed projects exclusive to their branch [5]. There is currently an ongoing agroecology-related UNISECO project focusing on diversification of animal production towards crops for direct human consumption in Sweden [6].

1.1. Social Movements

In Sweden, there are social movements organized around the concept of food sovereignty, which can be associated with agroecology. One such initiative is Matsuveränitetsveckan (The week of food sovereignty) that was launched in 2016 [7]. However, the concept of food sovereignty is still poorly known in Sweden, initiatives and social movements that have adopted the term tend to describe issues relevant for smallholders in the global south, rather than for Swedish agriculture. There are a couple of organizations and movements that carry the same ideological framework as the food sovereignty movement, without branding themselves as such. Among them we find associations, networks and companies working with the preservation and distribution of local seed varieties, where the most prominent one is Sesam. Another group to mention is the Slow Food movement, which has active groups in several Swedish locations. The above-mentioned initiatives all strive to increase the knowledge and implementation of traditional local food systems and to decrease the dependency on transnational agribusiness companies. The aim is to avoid commercialization and loss of local control over food systems.

The interest for urban agriculture has grown lately in Sweden which is reflected in a growing number of farming training schools that require little or no farming experience [3]. There is also an increase in publications of how-to-grow literature and in the establishment of new associations and networks. Two examples are Stadsjord, aimed at upscaling urban agriculture projects, and Co-Grow, an organization that pair people owning spare land with growers that lack access to land, mostly in an urban setting.
There are in Sweden two farmer organizations for smallholders, Småbrukarna and Nordbruk. There is also a recently started Agroforestry Sweden organization. All three work actively to promote agroecological principles but they are less visible in public discussions about agricultural systems in Sweden. The substantially larger Ekologiska lantbrukarna (Organic farmers) is a farmer organization for organic producers of all scales, with only a partial alignment to agroecological principles.

1.2. Agroecological Practices

There is a growing interest for agroecology farming practices in Sweden, although from a very small base [3]. The practices of regenerative agriculture, holistic management, agroforestry and permaculture are at the centre of this trend. Such practices are mainly carried out by smaller farms where the economy is complemented with incomes from activities outside of the farm.

The same growing trend is seen in small-scale farmer networks, such as the Facebook group Småskalig grönsaksproduktion (Small-scale vegetable production) and in increasing numbers of farmer schools for adults with limited farming experience. There is also a general increase in the interest for urban and peri-urban farming. However, the vast majority of Swedish farmers rely heavily on large-scale, low-complexity agricultural systems, which also apply to many organic production systems. Such farming systems have been favoured for a long time by policies, educational institutions and advisory.

1.3. Alternative market and local product distribution channels

During the last decade several important alternative market forms have emerged and grown, this has created completely new opportunities for both producers and consumers.

The most significant alternative market model in Sweden today is the REKO-ring, a widespread local market model that has grown rapidly in the Nordic countries since its conception in 2013 [8]. The decentralized structure of the distribution model has allowed it to proliferate wide across the country. In Sweden, there is also a modest, but rapidly growing, number of Community Supported Agriculture (CSA) farms and farmers co-ops [3]. What characterize the Swedish local distribution channels is the tendency to market and communicate through digital platforms, apart from above-mentioned REKO-ring, the initiative Local Food Nodes is a solely digital platform aimed at mapping out local market nodes.

The existing alternative markets can be considered relatively well developed. A possible explanation is that the consumer perspective is prioritized and at the centre in local food production, at the expense of less visible production aspects. Many consumers have little knowledge of farming systems and do not actively take part in formulating how those should be designed. Understanding and taking part in alternative consumption and distribution channels is for most consumers considered more tangible.
2. Initiative analysis

**REKO-ring**

**Contact details:**
No centralized organization with a website, only local REKO-groups on Facebook.

**General description**

REKO-ringar, or simply REKO, is a way to organize direct trade of local agricultural products. REKO is an abbreviation of “Rejäl Konsumtion”, which loosely translates to Proper or Fair Consumption. The concept started in the Swedish speaking areas of Finland in 2013, and rapidly spread to Sweden as well as the other Nordic countries. Today, there are local REKO groups in many Swedish municipalities. The trade is organized through local REKO facebook groups, where producers announce what they currently have for sale, and consumers place orders in the chat. At a fixed time and meeting point, consumers and producers meet to buy and sell what has been agreed upon. In some sparsely populated areas of Sweden there are local farmer organizations working with projects to enable REKO trade, but elsewhere the activity is completely organized by the civil society.

**Objectives**

- To create spaces and opportunities for consumption of local products.
- Enabling small-scale producers to find consumers in their vicinity while allowing them to sell their produce at reasonable prices.

**What we can learn?**

- Social media can be of great help when finding more sustainable and more equitable ways of organizing food chains. The form the trade is organized does not require membership or any additional fees or responsibilities which makes it is easy for both producers and consumers to take part in REKO whenever they have time and possibility.
- There are many producers with an interest of selling their produce locally. Meanwhile, there is a high demand from consumers to buy local food. With the development of new, more attractive and simplified trade models there is thus a high potential of making food chains in Sweden more locally based.
Positive impacts

Local food has been made more accessible with REKO. Local foods generally hard to access in Sweden, although the demand is high.

REKO trade saves time and money for producers compared to other forms of direct sale to consumers, such as farmer markets. The trade takes short time and producers knows exactly, before the trade, what amounts to bring and what the revenue will be. favourably, producers also benefit from the trade model by finding a larger group of consumers.

The local model ensure that financial means stay within the local economy. The producers and consumers can agree upon a fair price without needing to share the value with retail companies and middlemen.

The direct contact between producers and consumers will likely contribute to more horizontal relationships and in extension establish an important farmer-consumer link which is widely lost in the Swedish society of today. The direct trade also has a social aspect in it which makes it fun and engaging. People like to meet up and talk to old friends as well as other producers and consumers.

The direct trade enables substantially shorter transports and a potential of reducing food packaging. This means that REKO trade could exhibit major environmental advantages over retailed food.

Limitations

There is no formal organizational structure behind REKO. That implies that there are limited opportunities within REKO to work strategically with enlarging, developing and advertising the concept.

Anyone can join and sell products through REKO, which in practice means that there are no guarantees that the products sold are derived from sustainable production systems, neither in environmental nor socially or economic terms. Most producers are however happy to share information about their production, and many offer the possibility for consumers to pay a visit.
Jannelunds gård

Contact details:
Address: Övratorp Jannelund, 716 94 Mullhyttan
Website: http://www.jannelundsgard.se/
Email: adam@jannelundsgard.se
Facebook: /Jannelunds.Gard/

General description

Jannelunds Gård is a family farm situated in central Sweden, close to the town Örebro. It is an organic farm that since 2007 has been oriented towards diversified animal farming with Swedish traditional breeds, mainly focused on sheep but also pigs, cows and hens. Along with this, grains and legumes are cultivated on the farm to provide fodder to the animals. The farm has taken steps to act at a local scale by sending the animals to a local butchery and selling the meat directly to consumers. Overall, the farm produce is sold to a range of different markets such as large-scale retail (COOP), industry (Oatly), local restaurants, bakeries and artisanal food producers. Some sheepskin is also prepared by a local fellmonger. Since 2016 the farm has started to diversify its crop production by introducing legumes and vegetables to increase the production of plant proteins directly for human consumption. In relation to climate impact they see a need for reducing meat consumption in society and strive to reflect this on the farm. The legumes, vegetables and meat are mainly sold directly to consumers and marketed through Twitter. The farmers are also managing a restaurant, MULL, at the farm that uses their own produce.

Objectives

- To create a sustainable food production with reduced meat consumption.
- Investigating the possibility to cultivate alternative protein sources to complement the meat production.

What we can learn?

When facing challenges of maintaining an economically viable situation at a farm based in meat production, Jannelund has shown that there are other options than merely expanding the meat production. They have demonstrated that it is possible to diversify the output of the farm by introducing legumes and vegetables for human consumption and to still maintain economic stability.
Positive impacts

The farm has shown that it is possible to introduce new crops, as a complement to the main production of meat, and to market and sell them directly to local consumers.

The increased diversity of crops and reduced reliance on meat has enabled the farm to feed more people per hectare, from 0.9 to 2.3 between 2015-2016.

The farm is contributing to the local economy by using local suppliers such as a butchery.

The use of local marketing and direct sale of meat and vegetables has improved the farm economy.

Limitations

There is a lack of social networks in the area as well as access to services.
General description

Nätverket småskalig grönsaksproduktion (The Small-scale Vegetable Production Network) is a network for commercial, organic small-scale producers. The network is organized as a facebook group where the members give advice, post questions and support one another in challenges they may face in their farming. Discussions mainly cover technical issues, such as how to deal with pests and pathogens, what tools to invest in or where to buy seeds.

The network regularly organizes their own trainings, study visits and conferences with the ambition to learn from each other and create stronger farmers networks. The facebook group is not open for all, but anyone interested in small-scale vegetable production is welcome to join. A membership in the group does not require farming experience, membership fees or even active participation. In January 2020, the group had around 1350 members. There is no outspoken region where the network based, but due to the climatic limitations of vegetable production in northern Sweden, most members and producers live in the southern parts of the country.

Objectives

- To create a space where small-scale farmers can support and learn from one another.
- To create a knowledge hub of small-scale farming methods that are socially, economically and ecologically sustainable.
- To increase the numbers of small-scale farmers in Sweden by providing social support and making knowledge and know-how of small-scale vegetable production more accessible.

What we can learn?

- There is in Sweden a growing interest for small-scale farming. A large share of people having the interest however lack a proper background in farming. The emergence of the network show that there is a need for low-threshold spaces where inexperienced farmers can start to explore and develop their capabilities in their own pace with the help and support from others in the same situation.
- Social media play an increasingly important role in changing the agricultural landscape by creating new spaces for knowledge-sharing and empowerment of farmers.
AGROECOLOGY INITIATIVES IN SWEDEN

- The role of civil society in changing the agricultural landscape should not be underestimated. The network shows that people can organise astonishing things from the grass-root.
- There is in Sweden a lack of institutionalised advisory in small-scale vegetable production, although the group of people that want to engage in small-scale farming is constantly growing bigger.

Positive impacts

Public and private institutions in Sweden that provide advisory to farmers tend to focus on large-scale producers who manage farming systems that are radically different from the small-scale vegetable producers. Large-scale producers are also the ones being represented in farmer organizations and targeted in political programs. There has thus been a sort of technical and political vacuum around small-scale farming, where the network has been able to play an important role.

The network constitutes a low-threshold space where inexperienced farmers can start to explore and develop their capabilities in their own pace with the help and support from others in the same situation as well as more experienced farmers.

Limitations

The network has a decentralized structure and focuses on production practices. Although its members could benefit from it, the network does not consequently work towards actively influencing legislation, policies and programmes that today favour large-scale producers at the expense of small-scale producers.

The group has the character of “an amateur teaching another amateur”. Such a horizontal relationship create trust, understanding and two-way learning, but cannot always replace professional advisory in soil conservation, irrigation, pest management and farm economy.

Although most members of the group are women, at the moment a majority of the moderators are men. Very few posts in the group are aimed to discuss gender-related issues in agricultural production.
AGROECOLOGY INITIATIVES IN SWEDEN

General description

Föreningen Sesam (The Sesam Association) works towards preservation and distribution of traditional, rare and local seed varieties. The organization, established in 1982, has currently around 1700 members spread all over Sweden. The association’s practical work is divided into two main branches. One branch consists of the regular members cultivating and sharing seeds with one another. The other branch works with controlled and systematic registration, propagation, and preservation of seed varieties through a system of 27 guilds (skrån), one for every crop that the association works with. In every guild, there are one warden (ålderman) appointed that are responsible for the seed propagation of the specific guild crop, while various journeymen (gesäller) are delegated to assist the warden in propagating the specific variety of the guild crop. The Sesam association also organizes regular trainings in seed cultivation practices for its members and publishes magazines and other printed material on traditional local varieties, agricultural history and technical guides in seed cultivation and propagation.

Objectives

- Preserving local, rare and traditional seed varieties and making such seeds available to the public.
- Spreading knowledge about traditional agriculture, seed cultivation and agrobiodiversity.

What we can learn?

- Having a clear structure where association members have dedicated responsibilities and tasks can be very helpful, as well as providing regular trainings in seed cultivation.
- If well established, an associating can play a huge role in preserving and propagating biodiversity of agricultural crops.

Föreningen Sesam

Contact details
Address: Langelandsgatan 36, 164 43 Kista
Website: https://foreningensesam.se/
Email: foreningensesam@gmail.com
Facebook: https://www.facebook.com/groups/342638852573806/
Positive impacts

The Sesam association plays a crucial role in preserving seeds and increasing the knowledge and interest for local, traditional, and rare varieties in Sweden. Thanks to the Sesam association, many old cultivars have been propagated and made available a broad group of growers.

The organization allows less experienced seed growers as well as non-seed growers to take part in the organisation by sharing or receiving seeds for own cultivation.

The regular trainings that the association provide are a crucial component in preserving local seed biodiversity, since seed cultivation requires special skills and knowledge.

The association uses a sharing economy approach, where member share seeds with one another without money transaction. This creates an inclusive and congenial environment.

Limitations

Seed preservation, registration and commercial production is today restricted by Swedish and European legislation. The association does however not work actively with strategic advocacy and awareness-rising towards decision-makers and/or the public in such questions.

There are today few attempts to create cooperation and synergies with other actors in Swedish food chains.

The association works primarily with seed biodiversity and does not work actively with promoting other sustainable farming methods.
General description

The course in small-scale farming is organized by Karlskoga Folkhögskola (an educational institution form that is tuition-free). The course, which ran for the first time in 2016, is intended for people who already have or are about to start up a small-scale farm production and want to learn more about sustainable small-scale farming methods. It focuses on vegetable production, but also briefly go through small-scale animal husbandry, food processing and farm economy. The course also emphasizes social and political aspects of local food production, national self-sufficiency, and environmental impacts of global agriculture. The instructors are small-scale farmers themselves, actively involved in farmer organizations advocating for alternative food chains and sustainable agricultural production systems. The course is free, and students only pay for accommodation and food at training.

How is the course designed?

The course is organized as a distance course with six training gatherings from early spring to late autumn. The training gatherings take place at the school as well as at the Rikkenstorp farm, a small-scale operation inspired by permaculture and agroecology principles. During the year the students are intended to take care of, develop and evaluate their own productions. Many of the students already have farming experience when they start the course, and there is in an outspoken pedagogical approach of mutual learning and inclusive participation.

Positive impacts

The course chooses to brand itself as a course in agroecology, and thus contributes to make the concept better known in Sweden.

The course creates a sphere in Sweden where agroecological practice with production focus is taught and discussed while also bringing up the social sides of agricultural production. Most arenas tend to focus on either global issues and politics or environment and ecosystem preservation or productivity.

Students normally keep in touch with one another after the course and share with one another experiences of failure and success, which leads to continual learning and provides a
supportive network for small-scale producers and others interested in sustainable food production.

Limitations

The course mainly focuses on vegetable production and there are limited opportunities to learn other parts of small-scale farming in depth.

The course is only open for around 15-20 students per year.

The broad mix of students with diverse backgrounds is largely an asset, but also implies that the instructors have a hard time providing a course content that is relevant both for those who just started farming a small plot for own consumption and those already running a farm business.

There is limited emphasis on gender issues in farm work.

What can we learn?

- There is growing interest from people of all backgrounds and with all production ambition levels to learn about sustainable and small-scale farming. Meeting such interest with low-threshold trainings and social contexts is a powerful tool in advancing the development of agroecological practices.
- When students are given the chance to learn from other students, and instructors and students also get the chance to learn from one another in rather horizontal relationships, positive synergies are created. The importance of creation of such environments should not be underestimated.
- Using transdisciplinary approaches to farming and food production raises awareness of food systems. It also increases the motivation to engage in food production as well as other activities aiming for more sustainable food systems.
General description

The Master’s programme in Agroecology is a 2 year long academic education at the Swedish University of Agriculture (SLU) and it was established in 2010. The programme is interdisciplinary and investigates the social, economic and environmental barriers and opportunities for small scale and sustainable agricultural production. Some examples of subjects are: agronomy in a systems ecology perspective; farm production integrated with nature conservation and production of ecosystem services; the sociology of farming and agriculture.

How is the education designed?

The programme is based on both theory and learning through experience, using real-life cases as an integrated part in the education. It is aimed towards students already carrying a bachelor’s degree. The aim is to provide understanding of the natural and anthropogenic processes that shapes agroecological systems. The students should acquire the ability to identify and formulate complex, integrated socio-economic and ecological contexts in agroecological systems. They should also understand different stakeholders’ role in the management of agroecological systems and be able to support and operate agroecological projects.

Positive impacts

New collaborations have been developed among students, academic departments and faculties, farmers and other stakeholders, both at national and international levels.

The programme has stimulated transdisciplinary and action-oriented research and learning processes, which have catalysed new research methods and led to a deeper understanding of what is needed to develop sustainable food systems.

Limitations

Rather few students are studying the programme, 5-10 students graduate per year. The scarcity of agroecology graduates reduces the impact of the education in the agricultural sector and few actors are aware of what these graduates can contribute with.
The Agroecology programme is held at the Alnarp campus of SLU, which is smaller than the larger campus of Ultuna. The departments at Ultuna has more resources in soil science, crop production and social science as well as long established agronomy programmes covering many disciplines. These resources could potentially strengthen the Agroecology master programme, if it would be situated at Ultuna, and cross-pollinate the educations.

What can we learn?

- The quality and success of agroecological education depend on recruitment from multiple disciplines, as well as training for teachers and researchers in alternative learning methods.
- Decision-makers at universities need to support agroecological educational programmes that integrate holistic, interdisciplinary, stakeholder-engaging and action-oriented approaches. Funding for education needs to be tailored to interdisciplinary collaboration.

3. Bibliography

4. Acknowledgement

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Agroecology initiatives in the United Kingdom

Viviana Ceccarelli, Stella D. Juventia

1. Current situation of agroecology in the country

Agroecology was introduced by Miguel Altieri in the 1980s, but it was not until the 2000s that people’s awareness about agroecological principles increased in UK. Initially, agroecology was accepted as an important umbrella term for ‘farming with nature’ encompassing practices such as permaculture, organic farming, agroforestry and biodynamics, and the term was used, to express the alternative to industrial agricultural systems. Agroecology, set in the framework of food sovereignty, was being promoted by the UK Food Group. While this broad definition contributed to the growth of agroecological concepts, a clear set of principles has subsequently helped to frame what agroecology means as practice, science and a movement in the UK context. These principles were based on those developed by global agroecological networks and events, especially the Nyéléni Agroecology Forum and promoted in the UK by CSOs and the Landworkers’ Alliance (UK members of La Via Campesina). There has been an increasing support for agroecology. These include practitioners and organisations (E.g., the Soil Association, the Organic Research Centre, the Permaculture Association, Sustain: the alliance for food and farming), events and processes (E.g., the Oxford Real Farming Conference and a People’s Food Policy), and the academic community [E.g., Coventry University’s Centre for Agroecology, Water and Resilience (CAWR)].

In the last decades, the agroecological movement has been increasingly supported by practitioners and organisations (E.g., the Soil Association, the Organic Research Centre, the Permaculture Association), and events (E.g., the Oxford Real Farming Conference). At the same time, agroecology has also been growing in significance in the academic community. For instance, CAWR was instated in the early 2010s and has acted as an intellectual hub for many of initiatives associated with farmer-led knowledge in the UK.

Though it is difficult to identify agroecology with specific areas of the country – and determine the causal factors for its adoption which are hugely complex – there are certain regions of the UK that have been less exposed to land clearances, enclosures, intensive agriculture and consolidation of land, thus maintaining the connections between people and land, making it possible for agroecology to take root. For instance, in the uplands of Scotland, crofters have maintained ways of farming that have kept communities rooted in sustainable land management – the Scottish Crofters Federation is an important civil society group that works “to safeguard and promote the rights, livelihoods and culture of crofters and their communities”. Equally, areas of Wales have maintained a cultural identity that is forming an
important part of the growth of agroecological farming initiatives. Alongside this, some communities across Wales (E.g., Mid-Wales) have been hubs for sustainability, local-food systems and innovation. There are a number of factors driving this, including the ability to access land more easily and local food movements associated with the Welsh cultural movement. Finally, the South West of England also has seen the growth of agroecological farming techniques, possibly due to better climate for growing vegetables, the progressive food culture in the city of Bristol and Devon and a large number of Landworkers’ Alliance members.

Among civil society in UK, the term ‘organic’ and to a lesser extent ‘biodynamic’ is well known, but ‘agroecology’ is still not recognised outside of ‘alternative’ market, largely because the agroecology movement has railed against involvement in conventional markets and associated codification and certification. The UK population has been relatively cut off from farming since the Industrial Revolution and few families have rural farming connections. The fragmented small-scale producers, their weak voice amongst powerful actor-networks in favour of industrial farming, and the strong influence by large-corporates-funded food advertising, altogether pose a challenge to mainstream agroecology among consumers.

Also, at decision-maker level, there is very little recognition of agroecology as a concept. The Landworkers’ Alliance and Oxford Real Farming Conference, along with the recent IPBES [1], FAO Agroecology Symposia and IPES-Food reports are, to a certain extent, playing a role in changing the narrative towards agroecological farming and food systems. However, the consolidated and largely commodity-focused food and agriculture policies implemented by UK governments for decades have left little space for the voice of biodiversity-conserving, agroecological small-scale farmers and rural people to be heard. Sustainable farming practices – such as organic - have historically lacked the support of powerful voice of the National Farmers Union. The conservation community in the UK – which is extremely influential with millions of active members and significant cultural cache – has failed to represent the small-scale agroecological and biodiversity-conserving farming sector effectively. Instead of putting efforts to collaborate, the NGO sector has distanced itself, viewing farming and conservation as two separate disciplines.

Many policies in UK have discouraged agroecological practices. Policies have failed to use the mechanisms in the CAP to support small-scale producers (notably the 5-acre threshold for basic payments has not been removed); Agricultural research and development investment has been top-down with large research institutions developing technologies such as GMOs rather than supporting farmer-led innovation and problem solving; Government farm advisory services have been drastically cut since the early 1990s when they were privatised, removing a crucial knowledge-exchange mechanism for farmers. There is a lack of explicit vehicles to fund agroecology through the CAP, but one proxy can be made from the supports available for organic farming. In the UK, despite being the home of organic farming, producers enjoy far weaker conversion and maintenance supports in comparison with other EU member states. This is reflected in the low land area under certified organic management and recent declines compared to significant growth in many other member states.

There are, however, some policies that have indirectly facilitated agroecological farming practice. At the moment, there is a minimal amount of financial support for certified organic farmers but nothing that specifically promotes agroecology. Farmer payment schemes are set
up to achieve specific objectives in terms of managing habitats for wildlife, maintaining landscape and historic features and a code of cross compliance to promote Good Environmental and Agricultural Condition on farmland. Countryside stewardship schemes have pushed farmers to take land into a different style of management, including rewilding, rewetting peat bogs and establishing new wildlife habitats. Rural development funds have been a lifeline to many small-scale food and community initiatives that have otherwise been squeezed by the market. Policies have also been delivered on a regional basis for rural development in multiple sectors, including food, farming and environment; they have encouraged farmer cooperation, community led food initiatives and sustainable supply chain innovations.

Other initiatives led by NGOs have attempted to plug the gaps in farm innovation. Innovative Farmer's is an example of NGO which focuses on specific 'field labs' to test and trial farmer-led innovations. This is an antidote to the top-down agricultural research orthodoxy that takes many years to produce work and innovations that are often not applicable at farm level. Yet, very few policies have addressed the socio-economic dimension of agroecology.

In comparison to other European nations, the UK has relatively high concentration of large farms, and the majority of land is in the hands of 1% of the population. The fragmented nature of the small-farming sector suggests that there has been little support and space for the practices, principles and movements associated with agroecology to develop. Barriers to agroecology in UK exist at multiple levels, and these include:

i. Land – ownership is concentrated in the hands of a few, and land values across the UK are significantly inflated, prohibiting farmers from long-term planning required for community building and environmental stewardship and preventing new entrants to agriculture.

ii. Markets and supply chain – several large retailers dominate the food sector and exert a downward pressure on farmers and food producers. This limits the ability of groups of producers to collaborate and grow their market share. The growth of the organic market in the UK is a good example where demand for agroecological food products is growing, however this is not being met by domestic production as land area under organic is steadily declining.

iii. Research – most of the research and development funding in the UK goes to big institutes to produce work that is largely geared towards industrial production and sustainable intensification, be that through precision technology or genetic modification. The emphasis is not on small-scale, place-based innovation that is solving problems to meet the needs of citizens and the planet. It is still premised on productivist concepts of yield increases and economic efficiency that externalise impacts on the environment.

iv. Government – policies are strongly based on capitalist mentality where profit maximization is the number one priority. Area-based agricultural subsidies that favour large-scale, industrial farming. Unlike in other EU Member States, there are no basic payment supports for farms smaller than 5 ha.

Although the challenges to agroecology in the UK, the efforts of the small-scale and agroecological farming community are beginning to bear fruit. The recent RSA Food, Farming and Countryside Commission gave a 10-year transition to agroecology as its central government recommendation in its recent report ‘Our Future in the Land’ [2]. Though it has
not achieved a major impact, it has gained some publicity and there is progress on key areas on farm innovation, pesticide reduction and improving soil health that shows a positive path forward. Claims for policies supporting sustainable food systems were also presented in the document A People’s Food Policy written by coalition including the Land Workers’ Alliance, Global Justice Now, the Ecological Land Coop, The Centre for Agroecology and the Permaculture Association. In legislative developments to prepare for exiting the EU and CAP, the UK farming and land use sector embarked on huge consultative processes through which an effective coalition led by the Land Workers’ Alliance was built to amend the draft Agriculture Bill to consider whole farm systems and agroecological techniques as a public good. Brexit is seen as a major danger for UK agriculture as the exiting from European Unions could result into the loss of all CAP and environmental policies promoting sustainability. Despite the uncertainty surrounding Brexit, the push for alternative food systems is growing across government, the farming sector and civil society, opening up pathways for a rapid scaling up of agroecology across the UK.

1.1. Social Movements

The UK can boast a strong network of social organizations promoting changes in food systems, food sovereignty, alternative agricultural practices and, in general, agroecology. At national level, agroecological farmers and land-workers are well organized into associations and unions, including The Land Workers’ Alliance, Ecological Land Coop, Agricology. These organizations seek for improving the livelihood of their members and revitalizing rural communities while creating land-use systems based on agroecology and food sovereignty. They provide farmers with technical support and traineeship, create rural jobs, promote research on sustainable agriculture, and campaign and lobby for better policy. As this is a major issue for agroecological farmers in the UK, many organizations specifically focus on the land issue and work for providing access to land to all farmers and new entrants. For instance, the Ecological Land Coop, the Biodynamic Land Trust and the Agroecology Land Trust purchase land for farmers and form cooperatives where land is community-owned by the farmers. Practitioners of specific types of alternative agriculture have also built strong networks and formed their own association in the UK, E.g., the Permaculture Association for permaculture, the Biodynamic Association for biodynamic agriculture, and the Soil Association for organic agriculture. These organizations promote practices and research on their own topics but collaborate also with the overall network of small-scale farmers’ organizations. Finally, some areas in the UK had developed strong organizations linked to their peculiar agricultural history and practices. For example, In Scotland, crofters have reunited under the Scottish Crofting Federation with the aim to safeguard and promote the rights, livelihoods and culture of crofters and to fight for the future of crofting.

1.2. Agroecological Practices

Although ‘agroecology’ is not a widely used terms among practitioners, the UK has a long history of organic, biodynamic and permaculture practices that promote on-farm biodiversity, reduce environmental impacts and avoid the use of synthetic inputs. For instance, organic practices include maintaining and increasing soil fertility by crop rotations, green manure
crops, application of manure or other organic material; managing pest, diseases and weed by choosing resistant species and varieties, biological control through natural predators, thermal and mechanical weed management; rearing livestock with natural diet and without GMOs and without routinely given antibiotics. Agroforestry is also gaining some interest in the UK with research conducted by the Forest Garden Project of the Permaculture Association and the Agroforestry Research Trust. However, despite the tradition of alternative agriculture in the UK, practitioners struggle to implement agroecological practices on farm compared to other EU countries. For instance, in the UK the certified organically farmed area represents only 2.7% of the total farmed area (compared to 7% average in EU countries) and has declined by 36% compared to 2008 (compared to the overall growth in the rest of EU) [3, 4].

1.3. Alternative market and local product distribution channels

The UK has a relatively weak network of alternative market and local product distribution channels and this disadvantage farmers that implement agroecological practices. The grocery market is highly concentrated into few big supermarkets, with eight supermarkets holding a 93% market share of food retailing. This trend is increasing during years and has already led to the closure of 100,000 specialist food stores in the past 60 years. The concentration of the market has resulted in disproportionate power lying in the hands of specific industry buyers [5]. On the other hand, there are also some successful initiatives that are trying to offer an alternative food market to UK people. The Community Supported Agriculture (CSA) Network UK was established in 2013 from a project from the Soil Association. The network has formed CSA cooperatives across the UK in which producers and consumers have a direct relationship and share risks through a pre-arranged agreement for instance of fair price to be paid. The Food for Life programme and the Out to Lunch campaign from the Soil Association encouraged children to eat more vegetables and provided a huge market for sustainably sourced, ethical and local products in the UK.
2. Initiative analysis

Organic Farmers & Growers

Contact details:
Address: Old Estate Yard, Albrighton, Shrewsbury, Shropshire, SY4 3AG
Phone: 01939 291800
Email: info@ofgorganic.org
Website: https://ofgorganic.org/
Twitter: ofgorganic
Facebook: /organicfarmers
Instagram: /ofgorganic/
Linkedin: https://www.linkedin.com/company/ofgorganic

General description

Organic Farmers & Growers C.I.C was formed in 1973 as a marketing co-operative for organic farmers. Now they are an Organic Control Body and certifier for a number of sustainable land use schemes. OF&G certify over 30% of the UK organic sector including more than 1400 farmers who farm more than half of the UK’s organic land. Organic Farmers & Growers has its national headquarters in Shrewsbury, Shropshire (England), and operates across Great Britain and Northern Ireland, as well as the Isle of Man and the Channel Islands.

Their certification includes:
- Organic certification schemes for producers (farmers and growers)
- Organic certification scheme for processors including abattoirs, livestock markets, the storage registration scheme and for catering
- Organic Cosmetics and Bodycare
- Approved Inputs Scheme (Evaluation for inputs approved for use in organic systems)
- Pasture For Life mark for the Pasture Fed Livestock Association
- Composting to PAS100 and Compost Quality Protocol Composting to PAS100
- Anaerobic Digestion (Biofertiliser Certification Scheme) for anaerobic digestors
- Woodland Carbon Code and the Peatland Code

They collaborate with many actors including: UK Government’s Department for Environment, Food and Rural Affairs (DEFRA), organic farmers, the Association for Organics Recycling and Renewable Energy Assurance Ltd, the Scottish Organic Producers Association, food processors, abattoirs, wholesalers and retailers; Importers of organic products from EU member states and third countries; food and feed industry.

They are members of a number of key stakeholder organisations including the Agricology platform, the English Organic Forum, IFOAM and the IFOAM EU group, the National Farmers
Union, the Organic Trade Board, the Sustain Alliance for better food and farming, the Welsh Grain Forum and the Welsh Organic Forum.

OF&G offer support and guidance for businesses and ensure integrity throughout supply chains and networks that are certified to the European Organic standards.

What we can learn?

- Organic certification schemes help promote agroecological principles and, therefore, farm resilience
- For implementing agroecological practices, farmers need to convert not only their land but also their head. A farmer’s attitude must be appropriate to whole farm low-input systems, for instance, weeds are not all enemies and farmers can learn to tolerate some degree of non-crop plant species on the farm.
- For a successful conversion to agroecological practices, farmers need to take time, be careful, record their practices and observe all of the changes.
- Knowledge sharing is fundamental. It is so important to share experiences with others, get support and to build knowledge.

Positive impacts

As a certification body for organic farming, Organic Farmers & Growers promotes practices that improve farm biological diversity, soil organic matter and natural pest control.

Organic Farmers & Growers promote practices for recycling nutrient and reducing waste on farm. They also work closely with the Association for Organics Recycling and Renewable Energy Assurance Ltd on the certification of compost and biofertiliser from anaerobic digestion, respectively.

Limitations

Organic Farmers & Growers recognizes that organic farmers do not always get good recognition of the challenges they face on their farms from all wholesalers, retailers and consumers. As a minority, organic farmers can find they are subjected to unbalanced competition with conventional farmers.

Even for the farms certified organic by Organic Farmers & Growers or other certification bodies, it is not always easy to get a fair price that repays farmers for the production cost. But at a time when food and farming systems are being asked to design and to implement system-wide change in order to face 21st century challenges organic systems can show a successful and resilient model that others can look to work with and to help build and grow.
General description

The RSPB Grange Farm is a farm managed by the Royal Society for the Protection of Birds (RSPB) with the aim to demonstrate wildlife-friendly farming practices. RSPB is a charity founded in 1889 for protecting bird and other wildlife in UK and across the world. The farm was purchased in 2000 and is located in Knapwell, Cambridge (England). The RSPB Grange Farm, and RSPB in general, collaborates with many actors including BirdLife International, Birds Without Borders, Aldi supermarket, farmers and consumers. The farm includes arable land and permanent pasture which is grazed by horses and sheep. The arable land is cultivated with agroecological practices and has a very diversified crop rotation to take account of market opportunities and implement a robust integrated pest management programme. The farm also includes 8.5km of hedgerows, pollinator resources, seed rich resources, and woodland that accounts to over 10% of the farm’s cropable area to protect and enhance wild biodiversity. Even with 10% of land out of production, the cropping has maintained a similar profit in the last 20 years, not included money made through the UK’s Countryside Stewardship Scheme.

What we can learn?

- With the right management practices, it is possible to do agriculture that protects wildlife, soils, air and water, while also making profit for farmers.
- Healthier soils can grow crops in a more sustainable way, with high yields. Minimizing cultivations and maximizing green cover on field all year around is essential to keep the biology in the soil alive, reduce carbon emissions and enhance soil sequestration.

Positive impacts

They monitor changes in biodiversity to track what a difference their conservation management on farm has for farmland wildlife. For instance, breeding farmland birds increased by 150%, butterflies by over 400%, and farmland birds by 1700%.
The farm uses green compost from the public’s local bins, to improve our organic matter in our soils, using a product that would otherwise go to landfill. This helps to improve crop health whilst contributing to carbon sequestration.

They collaborate with actors of food chain and have a direct relationship with producers and consumers. For instance, their rapeseed oil is labelled with the Fair to Nature accreditation scheme, showing customers that at least 10% of their land is put to countryside stewardship schemes and/or conservation management.

They promote diversified market and have a variety of income sources. For instance, their diversified crop rotations spread the risk in their business.

They organize workshops and activities to promote agroecology and they run the Hope Farm with the aim to innovate agroecological principles with biodiversity conservation in mind.

Challenges and Limitations

Although it is good to implement the use of and recycling of green waste, the product is difficult to use due to potential contamination issues. Because of this, we are moving to the use of other organic matter waste without this issue.

Their collaboration with food chain actors, a challenge remains to ensure that there is a market for their premium product, with enough push from the consumers and from the supermarkets to provide this kind of produce on a wide scale to support farmers.

Although they promote several education activities, it is difficult to access the farmer audience except those who inherently want to and do practice agroecological principles already.
General description

Tolhurst Organic is a 19 acres organic farm situated just outside the village of Whitchurch-on-Thames in south Oxfordshire. The farm has held the organic certification from Soil Association for over 30 years, thus making Tolhurst Organic one of the longest running organic vegetable farms in England. In 2004, they were also the first farm to attain the Stockfree Organic certification and had no grazing animals and no animal inputs to any part of the farm for the last 10 years. In addition, in 2004 they also registered as a Community Interest Company limited by guarantee which certifies that all their activities benefit the community, they live in.

The farm weekly supply in-season organic vegetables and fruit via a Neighbourhood Rep' scheme to the neighbourhood including Reading, Pangbourne, Wallingford and Oxford areas. The delivery system in points run by Neighbourhood Reps not only helps to keep prices down, but also minimises food miles to almost zero. Finally, Tolhurst Organic are also founder members of Thames Organic Growers, a group formed to encourage the production of local food for local people and facilitate trade of organic products within the group members.

What we can learn?

Given the right management practices, it is possible to have an organic farm that not only benefit the environment, but it is also profitable and serve the community.

Positive impacts

The farm implements techniques that promote natural resources and biodiversity management including long rotations, diverse mixed cropping, green manure and woodchip applications, organic control of pests and diseases.

The farm performs regular carbon footprint studies and currently have a very low footprint. All waste material is returned to land via oodchip composting site. Over 75% produce are distributed within 10-mile radius from the farm. The farm weekly provides to their costumers seasonal, highly nutritional, and diversified products (they grow more than 100 different vegetables).
All staff receives equal pay with no share or dividends. The principle staff is housed on site and is given subsidised housing and free produce. The staff also have company pension scheme.

The farm serves the community: produce is sold within the neighbourhood, the farm collaborates with other organic producers and they donate overproduce to charities (FareShare).

The farm grows some traditional heritage varieties and uses traditional preservation methods.

The farm is a Community Interest Company. All the staff is involved staff in decision making processes in daily meetings and the farm serves the local community.

The farm organizes seminars and food festivals on farm for producers and costumers, they make regular TV and radio appearances, have written three books, receive schools’ visits, and held a training programme and consultancy service for new entrants.

**Challenges and Limitations**

The implementation of these practices is labour-demanding.

Doing studies on farm footprint and planning the required actions to minimize energy consumption and waste production require lots of time and efforts.

Further efforts are required to educate costumers and make them acknowledge the value of a healthy and nutritional diet.

Staff pay is the business single expenses. Unfortunately, it is still hard to pay much over minimum pay due to low cost of food in UK.

Some produce may be sold below production cost especially during times of glut because the farm does not always have sufficient customers for crops that give higher than normal yields.
Although the farm promotes traditional varieties and practices, it is sometimes difficult to make them profitable and promote novel vegetables to consumers. Also, seed quality is sometimes poor.

Although they are always available to share their experience, they also experience a very high pressure of enquiries from interested parts and are not always able to fully respond due to time constraints. They need to balance what the educational aspects with the management of the farm itself.
General description

The Soil Association was founded in 1946 and is the UK’s leading membership charity campaigning for healthy, humane, and sustainable food, farming and land use. It developed and certified to some of the first organic standards in the world, and created Soil Association Certification Limited in 1973, the UK’s largest organic certification body that certifies 70% of organic food in the UK. The association now operates on a UK-wide basis, with some collaboration through international networks, and has two offices in Bristol (England) and Edinburgh (Scotland). It collaborates with many actors including farmers, businesses, community initiatives, UK schools and hospitals. Their main activities include: campaign for change including lobby government and contest harmful farming laws; support farm innovation (E.g., Innovative Farmers, Future Growers and Future Farming Scotland programme); serve healthy food to school children, hospitals and cities in UK (E.g., Our Food for Life programme); support the organic market and provide technical and marketing advice through the Soil Association Certification; protect forests all over the word by supporting forestry, wood and paper clients through Soil Association Forestry.

The objective of the Soil Association is to promote good food for all people, produced with care for the natural world and according to the principles of organic agriculture.

What we can learn?

- Farmers’ participation is essential for successful innovation and research in agriculture: farmers often have the best ideas and they are more likely to adopt innovation that has been tested on their farm instead that off-farm. To this aim, the Innovative Farmers Network link researchers, and farmers in more than 100 farmer-led research projects.
- Working in public settings such as schools or restaurants is essential to establish awareness on healthy eating and market for sustainably sourced food. For instance, the Food for Life programme encouraged school pupils to eat more vegetables while the Out to Lunch campaign persuaded 13 chain restaurants to include vegetables in every child’s meal.
AGROECOLOGY INITIATIVES IN THE UNITED KINGDOM

Positive impacts

As a certification body for organic farming and sustainable forestry, the Soil Association provides a key regulatory role in supporting techniques that protect and restore soil, water and air quality while providing livelihoods and spaces for nature.

The programme Food for Life makes healthy nutritious food available as widely as possible in public catering settings. It has created important links and market opportunities for local, fresh and organic food.

The project Sustainable Food Cities (now with 57 towns and cities in the UK as network members) involves developing a cross-sector partnership of local public agencies, businesses, academics and NGOs committed to working together to make healthy and sustainable food a defining characteristic of where they live.

Limitations

Broadly, the Soil Association operates on a UK-wide basis. However, they currently struggle to have a significant policy impact in particular in Northern Ireland and Wales, as well as at a regional level in England.

Because the focus on agroecology tends to be towards the agronomic elements of the principle, this can come at the expense of the social justice elements. It is in the interest of the Soil Association as an organic certifier to pursue fair work, equality and fair pay, but despite the fact that fairness is a key pillar of organic principles, these factors are not required from organic certification.

Many of the niche producers in the UK with PGI or PDO status are organic. However, the strength that food culture and heritage offer to boost the organic/agroecological movement has not been captured and brought into the movement well.
General description

The Permaculture Association is a registered charity that promotes the theory and practice of permaculture in Britain. The Permaculture Association was established as a charity on 8 February 1983. The Permaculture Association operates on a UK-wide basis. The main office is based in Kirkstall (England) and they have two independent regional networks in Scotland and Wales. The main activities include creating permaculture research protocols, promoting permaculture among farmers and students, building an international network with farmers, research centres and policy makers, supporting learners and teachers, developing a national network of demonstration centre (LAND Centres), running an annual networking and learning event.

The Permaculture Association involves a large network of actors including permaculture practitioners and activists, People’s Food Policy, European Permaculture Network, Children in Permaculture, Youth in Permaculture, Growing Together, Ecolise, Mother Nature project. The objective of the Permaculture Association is to build a network with the power to create healthy cultures and ecosystems. Their vision is a healthy and peaceful world, where we care for each other, the earth and future generations, share resources wisely and continue to heal and regenerate communities and ecosystems.

Their specific aims are to:
1. Make permaculture accessible
2. Accelerate learning about permaculture
3. Grow permaculture networks
4. Share and develop permaculture practice
5. Work with others to tackle key challenges
6. Build a smart, effective, socially responsible and sustainable organisation

What we can learn?

- Building a strong network of organizations and practitioners is essential for any agroecology initiative to succeed. Bigger impact is achieved when more organizations join together and align goals.
- It is important to create a space for people to meet and share experiences. It is not only about practitioners and scientist, but also about people with different problems sharing different views.
Practices must be adapted to the local context in the way to best fit the local resources and limitation. This is the great success for permaculture (and agroecology).

Positive impacts

The Permaculture Association built and support a large and strong network of permaculture practitioners, researchers and organizations. They have started building this network since the 1980s when permaculture was not yet very well-known and they have helped other organizations/practitioners to organize themselves.

The Permaculture Association promotes permaculture among practitioners and researchers with courses, events and conferences.

The Permaculture Association promotes environmental practices among farmers and conduct research to further improve these practices - for instance with the Forest Garden Project.

Limitations

Although it is in their interest to advocate for sustainable agriculture, it is still difficult to have a substantial impact at policy level. However, together with other organizations they are getting stronger on this point – for instance with A People’s Food Policy.

At the moment, is it still hard for permaculture to compete with the highest economic benefit of industrial farming and this may make adoption difficult for farmers. Further research can improve permaculture practice and prove their economic benefit.
General description

- The Centre for Agroecology, Water and Resilience is one of Coventry University's flagship research centres; the largest centre in the world researching on linkage between agroecology and sustainable food, water and community resilience.
- Topics covered range from sustainable farming practices, climate change, preservation of local and traditional resources, circular economy, resilient food systems, rural development, governance around agroecology to food and farming policies.
- The research objective is to develop and integrate new knowledge in social, agroecological, hydraulic, environmental process as well as the pivotal role that communities play in developing resilience

The research

- Collaboration with several hundred stakeholders from all over the world, working on over 50 projects across more than 45 countries at any one time.
- Active exchange of knowledge, opinions, feedbacks, values and interests among the stakeholders involved.
- Examples of projects are:
  - Horizon 2020 Ecodry 2014 on agroecological practices for resilient farming systems,
  - Blooms for bees 2016 on bee-friendly gardening,
  - Horizon 2020 KEEPFISH 2016 on vulnerable fish migration,
  - Power to Change 2017 on social impact toolkit on agroecological businesses
  - Resources of Hope: India 2017 on rural development,
  - Horizon 2020 Organic-PLUS (O+) 2018 on evaluation and alternatives for contentious inputs in organic agriculture,
  - Stabilization Agriculture unit - research enhancing resilience in disasters-affected areas through transdisciplinary agroecology-based practices
AGROECOLOGY INITIATIVES IN THE UNITED KINGDOM

Type of outputs of the knowledge created

Scientific publications, multi-media, change and innovation in practices, policy briefs, awareness and social network co-creation

Limitations

- Challenge of multidisciplinary research and holistic methods
- Competitive research funding process
- Weak policy support for agroecology research and development

What are the factors for success?

- Participatory and transdisciplinary methodologies
- Academic freedom
- Researcher motivation, visionary leadership and support
AGROECOLOGY INITIATIVES IN THE UNITED KINGDOM

General description

- The Agroecology Group belongs to the Ecological Sciences research group of the James Hutton Institute, one of the Scottish Government’s main research providers in environmental, crop and food science.
- Topics covered include soil fertility management, biodiversity enhancement, sustainable farming practices, landscape design, integrated pest management (technical), climate change, ecosystem services supply chain and networks (eco-environmental), preservation of traditional knowledge and food and farming policies (cultural-political).
- The research objective is to provide a rigorous scientific basis for sustainable croplands by examining how plants, animals and microbes may interact to form a dynamic ecosystem supporting long-term economic offtake.

The research

- Collaboration with farmers, agronomists, supply chain industries (food products, feed processing, brewing/ distilling), agricultural suppliers (inputs, seeds), plant breeders and knowledge exchange organizations.
- Active exchange of knowledge, opinions, feedbacks, values and interests among the stakeholders involved.
- Integration of various disciplines – crop production, ecology, socioeconomics, bioinformatics, mathematical modelling, spatial mapping and technology development, together contributing to and co-constructing the research.

Type of outputs of the knowledge created

Scientific publications, practices change and innovation, awareness and social network co-creation

Success factors

- Co-innovation with stakeholders to address challenges in agroecosystems
- Multi-disciplinary approach

AGROECOLOGY GROUP, JAMES HUTTON INSTITUTE

Contact details:
Address: Invergowrie, Dundee DD2 5DA, Scotland
Website: www.hutton.org.uk
Email: Graham.Begg@hutton.ac.uk (leader of Agroecology Group)
Facebook: @JamesHuttonInst
Limitations

- Appropriate national (UK) funding sources
- Identification of appropriate routes to encourage and facilitate change in agricultural practices

What we can learn?

- Recognizing stakeholders as part of the research team rather than as recipients of knowledge exchange material.
- Working with stakeholders throughout the agricultural supply and value chains.

3. Bibliography


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Conclusion

Stephane Bellon, Tommaso Gaifami, Paola Migliorini, Sara Monti, Alexander Wezel

The term “agroecology” is interpreted differently in each country depending on context and culture. It differs even from region to region (e.g. in Belgium and the UK), which suggests deeper exploration and inclusion of other EU countries. However, it is frequently associated with the term “organic” and “sustainable” or to a narrower scope of agroecology (like integrated pest management etc.). Only the initiatives linked to the Movement pillar use the term “agroecology” with a wider meaning with a system thinking and practice approach, including social aspects (e.g. in Spain, Croatia and France). In some cases, the origins of agroecology started from the academic circles (e.g. in Sweden and Albania), in some others from connections with social movements (e.g. in Spain). This led to different effects on the perception and development of this term in each country.

In general, we can conclude that agroecology is not widely recognized by the general public and at political level. It is usually perceived as something like an alternative food market (e.g. in the UK, Croatia, Serbia, and Sweden) or limited to a minimum standard of care (agri-environmental measures, organic subsidies, animal welfare, etc. like in Croatia and Albania). Sometimes it is also used as a slogan by policymakers (e.g. in Hungary and Austria). However, there are some countries where agroecology is taken in consideration in public policies (e.g. France, UK). At the same time, the concept of agroecology is growing among citizens and policy makers in most of the studied countries (e.g. Belgium and Sweden) as well as among farmers that decide to adopt low-input or organic practices.

Agroecological practices are still very limited mostly because of a lack of short-term economic valuation, political support and practical knowledge. In addition, most farmers which currently adopt agroecological practices have done it without recognition with a specific label (e.g. in Ireland and Austria). In general, agroecological practices are considered and perceived as organic practices and there is still a long way to go to include political, social and cultural aspects into farming domain. On the contrary, for food issues, agroecological approach becomes relevant.

Even though there are several examples of research institutes that include agroecology in their curricula and courses, funds for agroecological research are still very limited in quantity and time (mostly short-term research projects). Furthermore, there is a lack of traineeships for farmers and participatory research, leading to a gap between farmers needs and agroecological knowledge (e.g. in Ireland, the UK, Albania, Sweden, and Belgium).

This report represents a significant baseline for future research and developments of agroecology. It also gives an overview of practices and initiatives that might be replicated or fine-tuned in other contexts. However, one of the main findings of this work is that agroecology is strictly depending from the context where it develops, therefore each initiative should be adapted to its socio-political context.
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For any further information, please visit our website:
www.agroecology-europe.org