

Article

Eco-Social Agriculture for Social Transformation and Environmental Sustainability: A Case Study of the UPAS-Project

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Abstract: Rural areas are facing vulnerabilities and changes caused by negative social, economic and ecological externalities resulting from industrial agriculture systems. Locally embedded farms and bottom-linked approaches such as social cooperatives that act in the field of social agriculture are small, but valuable models to counteract these trends. This article is based on a case study conducted within the transdisciplinary research and development project Unlocking the Potential of Social Agriculture (UPAS), 2017–2020—financed by the Free University of Bolzano. The main focus of the case study is to determine the impact of social agriculture initiatives on social and healthcare systems, the natural environment and the communities in which they act. Data collection includes a literature review, observations and interviews carried out on 35 case studies of social agriculture initiatives, mainly located in Italy. The field research points out that actors in the sector of social agriculture predominantly aim to integrate disadvantaged people socially and in terms of their labor, base their production on organic methods, and that social agriculture has the potential to foster eco-social transformation and development of rural areas by the combination of social and ecological concerns. Thus, we use the term “eco-social” agriculture to describe these approaches. Furthermore, five components of eco-social agriculture have been defined, which, together, offer an ideal set of acting principles, namely: (1) the empowerment and integration of disadvantaged people, (2) the promotion of environmentally friendly agricultural practices, (3) the protection of nature, resources and cultural landscape, (4) support to the local community, and (5) education for sustainable development.

Keywords: multifunctional agriculture; environmental conservation; green care; rural development; social cooperatives; sustainable agricultural systems

1. Introduction

While industrial agriculture systems are continuously expanding and increasing in their yield and productivity, this prevailing agricultural model [1] pays insufficient attention to the negative ecological, social and health effects. Worldwide, intensive agricultural practices are causing soil degradation, water pollution, overexploitation of natural resources, human and animal diseases, and the displacement and migration of rural populations. Further dramatic consequences are the loss of traditional farming practices, indigenous knowledge and land abandonment [2]. In addition to the negative impacts and the externalized social, cultural and ecological costs of intensive farming, the pressure on small producers and farms has increased. There is a constant decline of farms in Europe, which mainly affects small farms with less than 10 hectares. World market-oriented agribusinesses with a high dependency on external inputs such as synthetic fertilizers, pesticides and mechanization based

on fossil fuels, are increasing, while labor opportunities, species and ecosystem diversity decrease continuously [3,4].

Social agriculture is one approach within the broader concept of multifunctional agriculture, counteracting the negative impact of the global market-oriented farming business. The understanding of agriculture as a multifunctional sector has been introduced in recent years as a leading principle for the future of agriculture and the transition and development of rural areas [5]. The concept is based on the understanding of rural transition as a holistic process, which concerns not only economic and political, but also social, ecological and cultural aspects. Agriculture is not only the production of food and fiber. It also includes multiple inter-related dimensions, broadening and deepening farming, as well as non-farming activities [6].

Social agriculture or “green care” includes initiatives that combine farming activities and agricultural resources with a broad variety of therapeutic goals, social practices, educational purposes or community services [7–9]. The approach encompasses all activities in which agriculture serves as an essential factor for achieving social, educational or health outcomes [10]. The combination of agricultural activities with social and healthcare services thus, is a strategy of functional diversification, which preserves jobs and creates income opportunities, provides services to the community and can contribute to sustainable rural development [11–13].

State of the Art and the Added Value of Eco-Social Agriculture

Social agriculture is a traditional concept [7], which, nowadays, has been revived and institutionalized under different socio-economic and social-political conditions. In the last two decades, scientists, professionals and activists from all over Europe have researched the social and health effectiveness of green care as an approach of social innovation and new local welfare, and its characterization and implementation in the various European countries [7,10,14]. Additionally, at the European level, networks of social agriculture emerged in the past two decades, such as the SoFar project (from 2006 to 2009), which united the seven EU countries Belgium (Flanders), Germany, France, Ireland, Italy, the Netherlands and Slovenia [7] and the “Multifunctional agriculture in Europe” (MAiE) project in 2011 [15]. At the same time, networks developed at the national level, such as the “German Working Group on Social Agriculture” (DASoL) [14] or the Italian “Forum Nazionale Agricoltura Sociale” (FNAS) [16]. Although a large part of the scientific publications focuses on the therapeutic effects of green care [17], since 2010, an increasing number of studies focuses on their practical aspects for rural development and the maintenance of smaller farming entities. Some examples are studies on social agriculture in connection with stakeholder and institutional networks [7], rural and community development [12,18–20] and social relevance [12].

There is also an increasing number of studies with emphasis on agroecological practices, ecosystem services, local and traditional breed and crops and landscape conservation [20–23]. Organic and biodynamic cultivation methods are popular agricultural practice in social agriculture, as they are best suited to social agriculture activities with disadvantaged people and other target groups. According to the report published by the Italian Rete Rurale Nazionale [24] on social agriculture in Italy, almost 70% of the examined initiatives (N = 367) adopt organic or biodynamic farming methods. Comparable results can be found in a study in the Spanish region of Catalonia, where 60% of the structures of social agriculture follow the principles of organic and agroecological farming [19]. According to Wiesinger et al. [11], one third of over 600 green care farms in Austria are organically farmed, while similar results can be found in Limbrunner and van Elsen [14] on social agriculture in Germany.

Studies and reports are underlining that not only environment and natural resources are benefiting from the application of organic farming, and social, psychological and health aspects also gain importance and effectiveness. According to these studies [17,20,21,23,25] the following added values have been identified:

- The provision of jobs in a chemical-free, healthy and relaxing environment that promotes physical and mental health, social relationships, as well as the empowerment and self-esteem of people;
- The stronger therapeutic, inclusive and emotional effects through a closer contact with the living (soil, animals, plants), the perception of growth processes and outcomes, and the meaningfulness of producing food and goods for people and the community;
- The educational added value of an agricultural system that respects the environment and biodiversity, which supports the development of an appreciative attitude and relationship towards nature and agriculture and boosts the promotion of long-term eco-social actions and awareness of sustainability;
- The preservation and promotion of biodiversity, ecosystem services, multifunctional cultural landscapes, local products and traditions, with the aim of improving the quality of life in rural and disadvantaged areas by creating social cohesion and provision of services.

2. Material and Methods

2.1. UPAS—Unlocking the Potential of Social Agriculture

The Unlocking the Potential of Social Agriculture (UPAS) project used a transdisciplinary approach to investigate the field of social agriculture, which is currently regulated by law in Italy. The project started in autumn 2017 and ended with March 2020. It was led by the social science-area of the Faculty of Education and involved the Faculty of Science and Technology at the Free University of Bozen-Bolzano. Italy is considered a pioneer in social agriculture, and is also ahead of the South Tyrolean reality. The concept of social agriculture introduced in Italy with law 141/2015 is seen as a declination of multifunctional agriculture, representing one of the pillars for the development of rural areas. This law defines the activities of social agriculture that include the development of interventions and services with a social, therapeutic, educational or work integration objective. According to the law, social agriculture benefits disadvantaged people (physical or mental disabled people, drug addicts, prisoners, migrants, etc.) and people (especially children and elderly) residing in fragile rural areas such as mountains or isolated centers [24]. In June 2018, the autonomous province of Bolzano South Tyrol passed a law on social agriculture for the province. In doing so, it follows other regions of Italy that have already adopted regulations [26]. The project aims to take stock of the activities of social agriculture in South Tyrol and other Italian regions, as well as to analyze the actors and their experiences in this field. It evaluates development perspectives, possible new user groups and the prerequisites for further development. The focus lies on social and ecological aspects of social agriculture and on a comparative look at the established experiences in Italy.

2.2. Methods

As part of the UPAS research project at the Free University of Bozen-Bolzano, an explorative research based on the expertise of non-academic actors in the field of social agriculture and field-visits of 35 institutions, acting in eco-social agriculture was carried out. The cases are situated in the Italian regions of South Tyrol (10), Trentino (4), Veneto (8), Sicily (4), Lombardy (2), Friuli Venezia Giulia (1) and Liguria (1). Another four case studies have been analyzed in Austria, respectively located in Tyrol (1), Styria (1) and Carinthia (2), and one in Madrid, Spain. Data collection based on observation, interviews and a literature review was carried out from May 2018 to March 2020.

The case studies are agricultural businesses, social cooperatives, public facilities and agricultural projects that offer therapeutic, educational, nursing or social services to a broad target group of people. In total, 34 farms in social agriculture have been selected in Italy and Austria through an internet research and by interviewing experts in the field of social agriculture. For the selection, the Austrian platform “ARGE Green Care—Wo Menschen aufblühen” (2020) [27] and the two Italian online platforms “Forum Nazionale Agricoltura Sociale” (2020) [16] and “Fondazione Campagna Amica-Coldiretti” (2020) [28] were consulted. The project in Madrid has been included in the study as

the author visited it during a study visit organized through a collaboration between CREA-PB (Research Organization for Agricultural Research and Agricultural Economics) and IMIDRA (Madrid Institute for Rural, Agrarian and Food Research and Development), as part of the activities of the National Rural Network (Rete Rurale Nazionanle 2014–2020) in October 2018. Semi-structured interviews were held with non-academic/non-scientific actors, mostly the managers, of the selected initiatives or farms. They were carried out in most of the cases as part of a field-visit or in some cases by telephone. The interview included questions concerning the initiative itself (e.g., start of initiative, legal form and agricultural area), the specific activities or offers of social agriculture (e.g., social, education or therapeutic offers) and agricultural practices (e.g., cultivation methods, crops and breeds diversity). In addition to these questions, open discussions were held, in order to find out more about the specific experience, motivation, hurdles and potential of the initiatives.

3. Results

3.1. Social Agricultural Practices in Italy, South-Eastern Austria and Madrid

About 57% of the analyzed case study initiatives started their social agricultural activities in the past ten years, while only 17% started it before the year 2000. The main social aim of 31 cases is represented by social and labor integration, followed by environmental education and education for sustainability. Nursing and childcare services are offered only by one single initiative. Furthermore, 20% of the cases combine integrational and educational activities and reach, therefore, a bigger target group. Therapy services play a minor role in the analyzed initiatives. A total of five social agriculture initiatives recovered and manage previously abandoned agricultural areas and 50% of the companies cultivate autochthonous and/or rare crop varieties and/or animal breeds. A total of 12 case studies are cultivating a brought diversity of 40 to 60 different plant species on their fields. Small farm shops, Gruppi di Acquisto Solidale (GAS, Italian for ethical purchasing groups) and other forms of direct marketing are characteristic for social agriculture initiatives and adopted by 83% of the studied initiatives.

3.2. Actors, Motivations and Institutions

The legal forms of the analyzed case studies are divided in social cooperatives (11), agricultural businesses (10), third-sector-organizations (6), public institutions (4), agricultural cooperatives (2) and private sector organizations (2) that use agricultural activities for social, educational and/or nursing purposes (Table 1). This spreading of providers confirms the national situation in Italy [24], where social cooperatives are the dominant actors in social agriculture with 46%, while private farms have a share of 19%, third-sector-organizations 12% and public entities 6%. Most of these organizations emerged within the last 20 years. A total of 71% of these providers are specialized in labor integration and 35% in environmental education. As a result, they directly foster the shift to ecological agriculture and sustainable rural development. Social cooperatives, indeed, are especially appropriate for this field. Combining social-agriculture with social cooperative organization according to the Italian law n. 381/1991 opens a broader space for synergies and creative solutions. This law recognizes that a social cooperative of type B, aiming to encourage integration in employment for the benefit of disadvantaged persons, can work in the agricultural sector, as well as in the industry, trade and service sector. Social cooperatives allow for interesting experiments by merging agricultural production with social, cultural, ecological and political objectives [29].

Table 1. Overview of the 35 case studies of eco-social agriculture in the study area of the Italy and the south-eastern Austria and Madrid, differentiated according to the legal forms of agricultural business, social cooperative, agricultural cooperative, private sector, public institutions and third sector.

Name of the Initiative	Municipality/Region	Year ¹	Main Social Aims	Agricultural Practices
			Agricultural company/farm	
Santerhof	Mühlbach/Province of Bolzano	1991	Social and labor integration of people with special needs, educational activities for schools	Organic fruit and wine production; animal husbandry, breeding of an autochthonous pig breed
Al confin	Vicenza/Veneto	2002	Labor integration of disadvantaged young people; farm-kindergarten	Organic production of vegetables, cultivation of local varieties; animal husbandry, local chicken breed
La Costa	Sarcedo/Veneto	2003	Social and labor integration of disadvantaged young people	Organic wine, olive and vegetable production, cultivation of an autochthonous grape variety; use of regenerative energy
La Pachamama	Marostica/Veneto	2004	Social and labor integration; educational activities with schools; guided trekking with donkeys; courses in organic agriculture	Organic wine, olive, cereals and vegetable production, cultivation of autochthonous corn variety; beekeeping
Valentinhof	Meran/Province of Bolzano	2013	Social and labor integration of migrants and refugees	Organic production of fruits and vegetables
Almerleben	Dölsach/Tyrol, Austria	2014	Educational activities for children and schools; family-adventure-days at the farm;	Organic agriculture; forestry; animal breeding
Peintnerhof	Liesing/Carinthia, Austria	2014	Educational activities for schools; seminars on healthy lifestyles and nutrition with focus on people with civilization diseases	Organic agriculture; breeding of rare autochthonous sheep and trout species;
La capra felice	Frassilongo/Province of Trento	2015	Social integration of migrants and refugees; educational activities with schools; sustainable tourism	Organic goat breeding for milk and cheese production; keeping of a rare autochthonous goat species; landscape restoration, recovered abandoned land
Biosozialhof Vintlerhof	Brixen/Province of Bolzano	2018	Social and labor integration; pet therapy with donkeys; educational activities	Organic cultivation of cereals and vegetables; beekeeping; breeding of donkeys and poultry; sustainable forestry
Il giardino delle Bio-Diversità	Augusta/Sicily	n.d.	Labor integration of migrants and refugees	Organic cultivation of fruit and vegetables; recovered abandoned land

Table 1. Cont.

Name of the Initiative	Municipality/Region	Year ¹	Main Social Aims	Agricultural Practices
Social cooperative				
Quetzal	Modica/Sicily	1995	Labor integration; creation of circular economy and fair work conditions in agriculture	Cultivation and conservation of old, local almond-specie; processing of fair-traded chocolate
School on the farm	All over the province of Bolzano	1997	Environmental education and education for sustainable development through the offer nature and farm experiences	Composed by 30 mountains and valley, dairy and fruit farms, some of them using organic production methods
Conca d'oro	Bassano del Grappa/Veneto	2006	Social and labor integration; assisted housing for disadvantaged people	Organic cultivation autochthonous varieties of vegetables, fruit, cereals and olives; restoration of cultural landscape by planting trees and hedges
Farm-women cooperative South Tyrol	All over the province of Bolzano	2006	Offers ranges from near-natural childcare, summer care to childcare at events as well as senior care	Children and seniors are supervised at the farms that work partially with organic methods
Cadore SCS	Pieve di Cadore/Veneto	2008	Social and labor integration of people with disadvantages and migrants	Organic cultivation of artichokes; restoration of high-alpine landscapes, maintenance of forest and hiking paths
Terre Altre	Masi di Cavalese/Province of Trento	2013	Social integration: activities related to nature protection, environmental education and nutrition with schools and adults; forest-kindergarten	Biodynamic cultivation of old, local varieties of cereals, vegetables, fruit and medical plants; beekeeping; preservation of agricultural heritage
L'arcolaio	Siracusa/Sicily	2013	Labor integration for prisoners in and outside of the prison structure and for migrants and refugees	Organic cultivation of berries, vegetables and fruits
Nazareth	Cremona/Lombardy	2013	Labor integration of disadvantaged people; housing-support; creation of local markets and economic circuits	Organic cultivation of vegetables; processing of local products
Cooperativa Samuele	Trento/Province of Trento	2014	Social and labor integration for people with disadvantages	Organic cultivation of wine, fruit and vegetables; beekeeping
Vinterra	Mals/Province of Bolzano	2015	Social and labor integration	Organic cereals and vegetable production
M25	Vicenza/Veneto	2017	Labor integration of prisoners	Organic production of vegetables and fruit; organic bakery

Table 1. Cont.

Name of the Initiative	Municipality/Region	Year ¹	Main Social Aims	Agricultural Practices
Public institutions				
Biologischer Gartenbau Latsch	Latsch/Province of Bolzano	1992	Labor integration of people with mental diseases; direct marketing	Production of organic seeds and seedlings; cultivation and processing of vegetable also old varieties
Sägemüllerhof	Gais/Province of Bolzano	1994	Social integration and therapy offer for people with mental diseases; assisted housing	Biodynamic cultivation of vegetables, cereals and potatoes; breeding of endangered, local cattle species; restoration of crushed stone depletion
Orti sinergici, Legami di terra	Casalmaggiore/Lombardy	2013	Labor integration with disadvantaged people; open community gardening	Biodynamic gardening; permaculture; cultivation of old plant varieties
Agrolab	Perales de Tajuña/Community of Madrid, Spain	2016	Social integration of unemployed people and people at risk of social exclusion; community cohesion and local economy	Three-year training on organic farming and marketing of agricultural products; cultivation of local varieties; recovering of abandoned land
Agricultural cooperatives				
Consorzio le galline felici	Catania/Sicily	2008	Labor integration of migrants and refugees; creation of fair work conditions in agriculture	Support of member-farms in producing sustainable, organic and fair products, as well as in the marketing of products
Consorzio delle Valli e Dolomiti Friulane	Tramonti di sotto/Friuli Venezia Giulia	2017	Social integration of migrants and disadvantaged people; activities to promote sustainable tourism	Composed by 25 small multifunctional farms, some are organic; landscape restoration and recovering of abandoned pastures
Private sector				
Ökologische Landwirtschaft Attendorf	Hitzendorf/Styria, Austria	2012	Social integration of disadvantaged young people	Organic production of fruit, vegetables and herbs
Projekt Salewa Garden	Bozen/Province of Bolzano	2016	Social integration of refugees and migrants	Urban gardening project based on the principles of permaculture
Third sector				
Heimstätte Birkenhof	Velden am Wörthersee/Carinthia	1961	Social and labor integration	Biodynamic production of cereals and vegetables; breeding of autochthon poultry, cows and donkeys

Table 1. Cont.

Name of the Initiative	Municipality/Region	Year ¹	Main Social Aims	Agricultural Practices
Third sector				
Villa Rizzi	Sardagna/Province of Trento	2009	Social and labor integration of disadvantaged young people	Organic production of aromatic and medical herbs as well as vegetables
Semirurali Gärten	Bozen/Province of Bolzano	2010	Social integration of migrants; educational activities with schools and families from the community	Urban gardening based on organic agriculture for family-subsistence; beekeeping
Il Pomodoro	Bolzano Vicentino/Veneto	2011	Labor integration of disadvantaged young people	Organic agriculture and gastronomy
Fuori di zucca	Vicenza/Veneto	2013	Labor integration of disadvantaged young people.	Shop sells organic products coming from social agriculture initiatives of the surroundings of Vicenza
Progetto IntegrAzioni (Chapter 3.4)	Manarola/Liguria	2014	Social and labor integration of socially disadvantaged people, migrants and refugees	Recovering of agricultural land by the restoration of dry-stone walls so to realow cultivation of wine and olives

¹ The year refers to the year in which the organization started its social agriculture activities.

Another result of our field research is, that bottom-linked initiatives, such as local cooperatives of eco-social agriculture often arise from the actor's motivation to promote changes in the existing conditions of agribusiness, and to create new opportunities for rural and disadvantaged areas. They tend to establish a direct relationship between producers and users, to increase awareness of natural resources, as well as appreciation and respect to those involved in food production [12–14]. The concern of the actors besides the improvement of the life-situation of the involved disadvantaged persons is the ecological aim. Many of them underline the fact that it does not make sense to focus on human health and ignoring the health of nature. The proximity of social and ecological objectives of small farms and local cooperatives in social agriculture is evident. The farmer of La Pachamama, Veneto [30] for instance, expressed it in the following way: "If I pay heed to the health of people, biological farming is a precondition." Social agriculture without the sensibility for natural circuits, without ecological responsibility, for him, is not imaginable.

On the other side, social professionals working in eco-social agriculture initiatives, show a broader understanding of users. Their focus is not primarily on the specific disadvantages or deficits, but on the potential, vocation and dedication and how to develop it in a socio-productive way. They define their role as facilitators who have to create the context to strengthen people's capacity, to increase their self-efficacy and stability in daily life. They build person-centered as well as institution-centered networks for the social integration of users and the embedding of the social farming organization as a complementary system, which takes part in the process of decentralization and innovation of local welfare, especially in terms of the living environment of those affected [26].

Derived from the observation and interviews we collected during one and a half year, a general definition of eco-social agriculture has been created: eco-social agriculture is a combination of social services and responsible agricultural practices, an innovative approach and a sociopolitical mindset that responds to the negative effects of the globalized agricultural sector and population decline in rural areas. It supports environmentally friendly and regenerative production methods, while locally embedded educational, therapeutic, cultural and economic services are carried out in the sense of a sustainable society.

Thus, actors in social agriculture are often pioneers of eco-social transformation of rural areas on one, and of new local welfare systems on the other side. The Italian association for biological agriculture (AIAB) underlines the complementarity of social and ecological motivations of actors in social agriculture who predominately represent an attitude committed to the common good [21]. In addition, some of the actors we investigated restore historical cultural technics and cultural goods or revitalize traditional local species of plants and animals, contributing to cultural and biological diversity and local resilience. One of these examples will be presented below.

3.3. Components of Eco-Social Agriculture

In order to accompany present and future social agriculture initiatives towards an eco-social transformation and to foster the symbiosis between agriculture, humans and nature, a guideline composed by five eco-social components has been created and checked with interviewees. These components form a basis for the growth and further development of eco-social agriculture and are put together to inspire farmers, community initiatives, social cooperatives and stakeholders from the private and public sector. They indicate which direction eco-social initiatives can take to get closer to more inclusive communities, sustainable rural areas and an environmental-friendly agriculture. Each component is accompanied by a statement, as well as a more detailed explanation:

1. Empowerment of disadvantaged people: Eco-social agriculture enhances personal skills and self-esteem, with the aim of the social inclusion of disadvantaged people. Support of human-nature relationships embedded in natural cycles and rhythms, sensual experience with nature including animals; increase self-efficacy in the production of food, empowerment through the activation of human potential based on suitable tasks, resilience through taking responsibility,

success experiences, self-perception through physical activities; reproduce real-world and employment-like conditions.

2. Environmentally friendly, organic-ecological agriculture: Eco-social farming preserves the health of soil, plants, animals, people and the planet as a whole by reproducing natural cycles, increasing biodiversity and maintaining ecosystem services (Figure 1). It is based on natural cycles, such as the preservation of soil fertility, carbon storage capacity, natural water balance and microbial soil life; it avoids the use of chemical-synthetic pesticides, hormones and synthetic fertilizers; attention is paid to promoting biodiversity, animal welfare and human health; examples are practices based on the principles of agroecology and cultivation, such as organic, biodynamic agriculture, permaculture and/or traditional agroforestry or silvopastoral systems.
3. Protection of nature, resources and cultural landscapes: Eco-social farming supports the conservation and restoration of valuable cultural and natural landscapes and strives to preserve biodiversity. Measures and practices for the protection of species, natural resources, biotopes and/or landscape include the establishment and maintenance of protected areas; the preservation, promotion or reintroduction of animal and plant species worthy of protection, like rare or endangered traditional local breeds and crops; and the promotion of pollinators (e.g., wild and honey bees); it also includes the maintenance of ecosystem services and the restoration of ecosystems and cultural landscape, such as wetlands, alpine pastures and meadows.
4. Support to the community: Eco-social agriculture supports the use of local resources and the creation of networks, in order to reinforce regional economic cycles and to lead rural communities towards a sustainable development. It supports local-regional cycles and the resilience of a rural region by embedding production and marketing in local economic circuits, and by creating of job opportunities; preserving cultural heritage, traditional agricultural practices and knowledge, for example through the production of regional products; favors the decentralization of social services by new actors in the social environment, the creation of new networks between stakeholders from various sectors (e.g., health, education, social, agriculture, forestry, environment).
5. Education for sustainable development and environmental education: Eco-social farming fosters an appreciative attitude towards farming and nature and strengthens awareness, sustainability and respect towards common environment and resources (Figure 2). It includes formal and informal educational and experience contexts that cover topics ranging from sustainability, ecology, biodiversity, traditional agriculture, life on a farm, food production and natural resources, up to environmental and climate awareness; it promotes in an interactive, participative, researching and action-oriented way, personal skills, such as critical thinking, teamwork, solidarity, community cohesion and sustainable lifestyles. To account for the ecological long-term effects of social agriculture, more research is needed over the coming years and decades.

The entanglement of ecological and social value added becomes apparent. In order to make the appearance and application of the components more concrete, a case study, which was evaluated as part of the UPAS research project at the University of Bolzano, will be illustrated.



Figure 1. The social cooperative Terre Altre applies biodynamic cultivation methods and grows more than 60 different crops on two hectares. They also practice apiculture, environmental education and recovered numerous local weed varieties. Author: Terre Altre.



Figure 2. Children experience agriculture and the diversity of medical herbs on the fields of the Terre Altre social cooperative in Val di Fiemme, Trentino, Italy. Author: Cristina Vinante, Terre Altre.

3.4. (Drystone)Walls for Social Inclusion: The IntegrAzioni Project in the Cinque Terre National Park Located in the Region of Liguria, Northwestern Italy

The project IntegrAzioni, which started in 2014, is inspired by the model of social agriculture, and offers an opportunity to refugees and socially disadvantaged people to complete a qualification-internship in agriculture and drystone wall construction. These internships are intended to support people in difficult life situations, to gain work experience and to receive a fixed income. On the other hand, it forms workforces with skills in the farming sector, in order to support agricultural businesses and restore drystone walls. This project has been possible thanks to the contribution of ten different local, regional and national institutions.

The story of the project begins with a storm which severely damaged the picturesque coastal villages of the Cinque Terre National Park in 2011. The effects were particularly negative for the centuries-old terrace landscape, the infrastructure and, consequently, for the population, the ecosystem and the economy of this fragile area. After this destructive event the villagers of Manarola (located in the national park area) founded the Fondazione Manarola Cinque Terre ONLUS [31] with three main aims: (1) to adopt landscape restoration measures in order to protect the territory and to support the hydrogeological functions of the soil; (2) to recover abandoned agricultural area (approximately 80% of the cultivated area is abandoned) and make it again available to the cultivation of vine and olives; and (3) to preserve agricultural traditions and keeps old drystone wall construction techniques alive. The lack of local workforces in Manarola, due to over aging and migration of the population, led to the cooperation with Caritas Diocesana La Spezia-Sarzana-Brugnato, which manages the government structures for refugees and asylum seekers in the nearby city of La Spezia, and is also a reference point for socially disadvantaged people. Through this cooperation the project IntegrAzioni was born. Caritas is responsible for the work integration process, the organization of grants and internships and the selection of the trainees. The training is divided into three phases: in the first phase, the trainees receive a theoretical basis and a training with agricultural tools and practices. Phase two takes place on the agricultural terraces that surround Manarola. The foundation selects the terraces and get them through a free loan for use from the owner. Here is where the trainees learn to restore drystone walls, to clean the rainwater drainage system and to free the landscape from invasive shrubs. The trainees are accompanied by four elderly villagers with long-term experience in the ancient construction technology of the drystone walls. In the third and final phase, the trainees who want to continue the experience in the agricultural sector will be placed in private farms, on wineries or social cooperatives located in the national park area or in the nearby villages. Since the beginning of the project in 2014, until 2018 and after two training seasons, a total of 7809 square meters of agricultural area had been recovered, while 418 square meters of drystone walls have been restructured. A total of 3053 square meters of the recovered areas have been assigned to local farms while 4953 square meters will be assigned to the local agricultural cooperative Cinque Terre [31].

The IntegrAzioni project has been chosen as best-case for its variety of ecological and social benefits produced within a disadvantaged territory. The collaboration of local and regional, public and private actors, combined with innovative and inclusive approaches, shows how unemployment and landscape degradation can be defeated by creating new job opportunities and services, such as social inclusion and environmental protection. Furthermore, the “Art of drystone walling, knowledge and techniques” was added in the list of UNESCO Intangible Cultural Heritage in 2018, after Italy and other European countries submitted the application [32].

4. Discussion and Conclusions

Eco-social agriculture can be characterized by the combination of five components, delineating the added value that the approach is able to provide to people, community and nature [18]. Common to all approaches is the holistic view of the person, nature and the region. Following the defined components, all of the analyzed projects and initiatives can be attributed to eco-social agriculture. In fact, each of the 35 analyzed case study initiatives fulfills at least one or more components of eco-social agriculture.

The implementation and the field of activities can shift, depending on the circumstances, possibilities and local needs. These initiatives do not only opt for organic or biodynamic cultivation methods. Many projects revive agricultural traditions and preserve local crop varieties and/or animal breeds. The diversity of animal and plant species stands also for the diversity of people: diversity is turned into an enriching and strengthening resource that benefits nature and society. Diversity contributes to strong and healthy ecosystems, but also to flourishing communities. In the field of social work and local social policy, the approach can be seen as social innovation, able to generate new local welfare-settings. It must be taken into account, however, that within this competitive sector, social agriculture as a new welfare-supplier needs political support, as well as the establishment of a social and environmental policy framework and funding opportunities. The European Union offers already wide range of funding applicable in social agriculture, for example the “European Regional Development Fund” (ERDF), the “European Agricultural Fund for Rural Development” (EAFRD) and the “European Social Fund” (ESF) [7]. Additionally, the LIFE program for environmental, nature and climate protection projects [33] could be interesting to foster the ecological aspects of social agriculture in future. In addition, the upcoming EU H2020 program “from farm to fork” fosters a new approach in the field of new producer-consumer relation, which is an essential part of social agriculture [34].

The embedding processes of eco-social agriculture represent a great potential for disadvantaged people, as well as for the entire society. Additionally, regional cycles and resilience of the rural areas can profit. With its diverse informal, formal and non-formal educational processes, eco-social agriculture is helping to shape an eco-social restructuring of society. It is primarily based on the benefits for the disadvantaged, for the social environment and for nature. Eco-social agriculture sees disadvantaged people, as well as all people as part of a social structure and as part of nature. This shows that societal change has the potential to support the necessary eco-social turn [26,29,35].

As our field studies show, especially bottom-linked initiatives and social cooperatives in the field of social agriculture, are based on interrelated structures, transversal networks, strong local-regional embeddedness and a large weight of social and cultural values. Furthermore, eco-social agriculture unites three social spheres: the socio-cultural, the value-creation and the political sphere with community decision-making processes and diverse local, regional and national co-operations.

To sum up, three basic characteristics describe eco-social agriculture as intended in this article:

- (i) The combination of social needs of rural and disadvantaged areas, such as social inclusion processes, work integration, educational activities, therapy and care offers for people with special needs, based on sensibly designed agricultural activities, always considering gender equality and fair working conditions;
- (ii) The active interaction and cooperation at local-regional level with the population, institutions, companies, politics and social networks to promote identity, coherence, solidarity and support to local economy;
- (iii) The responsible use of natural resources in order to protect the health and well-being of current and future generations and the environment, the promotion of ecological practices and the conscious integration of measures to preserve biodiversity and the cultural landscape.

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