REA | ITALIAN REVIEW OF AGRICULTURAL ECONOMICS

Firenze University Press
www.fupress.com/rea

Citation: Francesco Basset, Francesca Giarè (2021) The sustainability of social farming: a study through the Social Return on Investment methodology (SROI). *Italian Review of Agricultural Economics* 76(2): 45-55. DOI: 10.36253/rea-13096

Received: October 9, 2020

Revised: February 4, 2021

Accepted: June 7, 2021

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

The sustainability of social farming: a study through the Social Return on Investment methodology (SROI)

Francesco Basset[1], Francesca Giarè[2]

[1] *University of Roma Tre, Italy*
[2] *CREA - Research Centre for Agricultural Policies and Bioeconomy, Italy*

Abstract. The aim of this paper is to study the sustainability of Social farming (SF), with attention to practices addressed people suffering from addictions. In this study the Social Return on Investment (SROI) has been used as assessment methodology; has been used, which is increasingly used to approach the quantification of social, environmental and economic benefits on different types of investment. The SF activity of the Agricoltura Capodarco Cooperative was studied in order to evaluate the outcome in monetary terms taking into account all the beneficiaries involved. The application of SROI allowed to estimate a return of investment, coming mainly from the social component, ranging from 1,89 to 4,10 times, according to the degree of conservativeness of the estimates. The study extends both the analysis of SF to people categories only marginally addressed before and the application fields of SROI as assessment methodology.

Keywords: sustainability, social farming, social inclusion, social return on investment, quantification of social benefit.
JEL codes: Q15, Q18, Q19.

1. INTRODUCTION

Social Agriculture sustainability is a major new research area in sustainable economics, which is driven by an increasing interest in the multifunctional role of agriculture (OECD 2001; Casini, 2009) and in the economic, environmental and social benefits associated with the agricultural sector. The value of agriculture, when it shapes the landscape, contributing to the conservation of biodiversity (Scher, McNeely, 2008; Henle *et al.,* 2008; Tayleur *et al.*, 2016), to ecological and hydrogeological land protection (Bastiani, 2014), to the sustainable management of natural resources (Clark *et al.*, 2016) and to the historical and cultural heritage of local communities (e.g., Protection and enhancement of the landscape of the monumental olive trees of Apulia by law – Apulia Region l.r. 14/2007), goes beyond its primary function of producing food and fiber. To these environmental, historical and cultural values of multifunctional agriculture, social agriculture further adds

the economic and social benefits related to its peculiar characteristics of social inclusivity, gender equality, and responsible production, which directly contribute to the United Nations' Sustainable Goals Development objective 8 (Deacon, 2016) and also objectives 5, 10 and 12.

The phenomenon of Social Farming (hereafter, SF) is regulated by a broad normative framework which follows the vertical subsidiarity principle. At the European level there is no normative framework to define SF, even though the need for the elaboration of an appropriate normative framework to regulate its activities, as well as to coordinate the policies and institutions of the various countries in this field, has been advocated (EESC, 2013). At a national level, the law 141/2015 regulates the functioning of SF, describes its activities and subjects and defines it as: «one of the aspects of the multifunctionality of agricultural enterprises aimed at the development of social, socio-sanitary, educational and social-work integration interventions and services, in order to facilitate adequate and uniform access to the essential services to be guaranteed to people, families and local communities throughout the national territory and in particular in rural or disadvantaged areas». The directive refers the law 381/1991 defining the functions of Social Cooperatives and the so-called disadvantaged categories of individuals.

Moreover, other policies making significant contributions to SF have been introduced in the Regional Strategic Plan 2014-2020, including those concerning "Cooperation for the diversification of agricultural activities into social activities" (sub measure 16.9), and those concerning "Development and diversification of agricultural holdings and enterprises" (sub measure 6.4) (Giarè,2019).

SF has had a remarkable growth in the last few years in Italy, showing a diversification of actors, experiencesand recipients (Giarè *et al.*, 2018), even if:

- there is a relevant presence of social cooperatives and, to a lesser extent, farms; other typologies of actors are less common;
- the activities concern all the typologies defined by art. 2 of law 141/2015[1], with a prevalence of social and working inclusion (Giarè *et al.*, 2017);
- SF is aimed at different target groups: people with physical or psychic disabilities, prisoners, drug addicts, young NEETs, elderly, refugees and asylum seekers, etc., but the activities addressed to people with disabilities are prevalent.

The aim of this article is to increase knowledge, and to stimulate debate, on methodologies employed to quantify the total benefit of social farming as an inclusive practice at the social-work level for the category of people affected by addictions. In particular, the objectives of this study were:

- to analyse the impact of SF project for people affected by addiction, for which there are few studies in literature;
- to understand to what extent the SF project examined has an impact on the people affected by addictions;
- to test the suitability of the Social Return on Investment methodology for the category of people under study and in this country;
- to analyse the sustainability of the specific project considered.

To achieve these objectives, the Social Return on Investment methodology was used for the identification of financial proxies associating a monetary value with every social and environmental benefit, as regards the project "I frutti della buona terra" of the "Agricoltura Capodarco" Cooperative.

In this work, a review of the literature available on SF will be given. Then we will briefly present the case study, i.e. the farms, specific project analysed and the methodology used. Finally, the results will be presented, starting from the identification of stakeholders and the construction of indicators and financial proxies, to then arrive at the calculation of the SROI indicator and the conclusion considerations on the results obtained.

1.1. Literature review

The literature on the multifunctional role of agriculture is broad and shows a differentiation between practices related to the agricultural world and those who benefit from it. Some studies focus particularly on the well-being role (Hassink, 2016) of agriculture according to categories of people with physical and mental disabilities (Garcia, 2018), while others show the importance of

[1] Article 2 of law 141/2015 defines the activities: «a) socio-labor insertion of workers with disabilities 'and disadvantaged workers […], disadvantaged persons […] and minors of working age inserted in projects of rehabilitation and social support; b) services and social activities and services for local communities through the use of material and immaterial resources of agriculture to promote, accompany and implement actions aimed at the development of skills and abilities, social and labor inclusion, recreation and useful services for everyday life; c) performance and services that accompany and support medical, psychological and rehabilitative therapies aimed at improving the health conditions and social, emotional and cognitive functions of those concerned, including through the use of farmed animals and plant cultivation; d) projects aimed at environmental education and nutrition, the preservation of biodiversity 'as well as' the dissemination of knowledge of the territory through the organization of social farms and educational recognized at the regional level, such as initiatives for the reception and stay of children in age 'preschool and people in difficulty 'social, physical and mental».

the inclusive role of SF for a plurality of recipients (Giarè, 2018), and through descriptive studies on the characteristics of social farms (Lanfranchi, 2015; Borgi *et al.*, 2019; Torquati *et al.*, 2019). In any case, the inclusion of these practices in European development plans (Scuderi *et al.*, 2014) demonstrates the importance that is given at the European level to the phenomenon of social farming. In this context, the importance of evaluating the impact generated by social cooperatives[2] appears evident (Zamagni *et al.*, 2015). Moreover, the importance of an approach to the evaluation of social farming regarding its importance in achieving sustainability objectives (Marchis *et al.*, 2019) was highlighted (Leck, 2012; Leck 2014; Borghi *et al.*, 2020). However, there are many critical issues related to the methodology for evaluating the practices of social cooperatives (Marchis *et al.*, 2019), which globally are mainly focusing on identifying the benefits of this phenomenon rather than on its economic quantification (Di Iacovo, 2020); in addition, in many cases quality of life is the only indicator used to assess the social benefits derived from these practices (Janker, Mann, 2020). Therefore, it follows that there is still a lack of a general agreement on what methods should be used to assess the multifunctionality of agriculture and in particular the social, environmental and economic benefits derived from SF practices.

In the literature there are many studies that have tried to propose methodologies for the evaluation of social impacts. It has been shown the need for a more complex methodology in respect to the most common Cost-Benefit Analysis (Arvidson *et al.*, 2010; Mulgan, 2010). The latter, in fact, has some criticalities regarding the measurement of benefits that are difficult to monetize, such as social ones (Cordes, 2017). Some studies have introduced the use of the Social Impact Assessment (Becker, 2001) to evaluate development projects in agricultural disputes (Ahmadvan *et al.*, 2009), while others have proposed a SWOT analysis (Foti *et al.*, 2013) or the Social Enterprise Impact Evaluation (Zamagni *et al.*, 2015) to assess the social impact generated by social cooperatives.

In the last years, the quantitative assessment of SF's social benefits has been highlighted in recent studies, which have used, as methodology, the Social Return on Investment (Leck, 2012; Leck 2014). The use of this methodology has so far been limited, in most cases (e.g., Tulla, 2018; Leck, 2014), to the category of people with mental and physical disabilities and its applicability to other categories, such as prisoners and former prisoners, people affected by dependencies and migrants, among others, has still to be fully explored. Nevertheless, the results achieved so far, using Social Return on Investment as assessment methodology, have shown that social farming practices are more than sustainable for people with physical or mental disabilities, with a social return of 2.8 – 3 times the investment (Leck, 2014; Tulla, 2018; respectively).

Currently, Social Return on Investment, although not very widespread, has shown to be an appropriate methodology for evaluating projects that generate important social and environmental benefits, in addition to the economic ones, and giving a complete and quantitative evaluation of the project's outcomes (Nicholls *et al.*, 2009). Social Return on Investment is likely to be an appropriate methodology for the study of the social farming practices on all user categories, but still requires validation tests on those user categories, such as that of users affected by addictions, which have received little attention, so far.

2. THE CASE STUDY

The sustainability of SF has been studied by analyzing a specific project realized by a social farm, located in Lazio region. In this region SF has been included as a practice for regional development. (l.r. 7/2018).

The social cooperative "Agricoltura Capodarco", founded 40 years ago in the municipality of Grottaferrata, has been selected for the study, since it has been progressively distinguished for its social projects related to agriculture. This farm stands out not only for the attention on its customers and on the environment, with organic production (breeding and zootechnics, beekeeping, fruit growing, horticulture, olive growing, wine-growing, direct sales and agritourism), but also for numerous activities with social purposes, such as social-work inclusion of disadvantaged people, educational farms, psycho-social therapeutic activities. SF is considered by the Cooperative as the main way to generate well-being for the local community and to carry out socially relevant interventions aimed at people in conditions of hardship.

In the present study, the focus is on a specific "Agricoltura Capodarco" project of SF named "I frutti della buona terra" since it was aimed at the occupational reintegration of people affected by different types of dependencies, mainly by drugs, through one-year work

[2] In the Italian legislation, Social Cooperatives are defined by the law 381/1991, which, at article 1, paragraph 1 defines: «Social cooperatives have the purpose of pursuing the general interest of the community to human promotion and social integration of citizens through: the management of social, health and educational services [..]; the performance of different activities - agricultural, industrial, commercial or services - aimed at the employment of disadvantaged people».

and training grants. The project, lasting 10 months, was started in 2017 as a collaboration among Agricoltura Capodarco, the Municipality of Velletri and the Velletri Public Services for pathological addictions of the National Health System (hereafter, Ser. D) and repeated every year. The project "I frutti della buona terra" is structured into two different phases:

- phase 1 (first three months): setting the institutional network involving the project partners, trainees (hereafter, users) and small farms active in the Velletri peri-urban area, which were available for the training and working stages of the participants to the project;
- phase 2 (seven months): on the job training and working stage in the selected farms.

Regarding the farms involved, it should be emphasized that a match the participants and the farms based on the interests and available activities. Therefore, the chosen companies included farms, both organic and non-organic, but also other companies linked to the agricultural sector, such as those involved in catering and green maintenance activities.

3. THE METHODOLOGY

The methodology used in this study is the Social Return on Investment (hereafter SROI; Nicholls, 2009), which integrates the social, economic and environmental values of the investments on the SF expressing values in financial terms (Nicholls *et al.*, 2009), as characteristic of most economic approaches (Bonazzi, 2005; Fujiwara, Campbell, 2011).

Given the interest in analysing a specific project and not the work of the whole Agricoltura Capodarco cooperative, the SROI was considered the most suitable method. In addition, the SROI methodology was chosen because it allows to quantify the social benefits at a monetary level, which was an objective of the study. Finally, it requires a high level of stakeholder involvement.

The SROI is composed by sequential phases: 1. identifying the main stakeholders of the SA initiative; 2. mapping the positive outcomes for every stakeholder; 3. defining proper quantitative indicators of every outcome; 4. selecting the most compelling financial proxies for each indicator; and, 5. estimating the financial positive impact of every outcome for each of the identified stakeholders. The SROI is evaluated as the ratio of financial gain and financial costs of the SF initiative.

Outcomes, indicators and proxies clearly depend on the category of users considered, on the stakeholders involved, on the type of agricultural practices and on their location in urban, peri-urban or rural areas. Guidelines and proposals for setting outcomes, indicators and proxies are available in the literature as books, manuals and published papers (Leck, 2014), even though adaptation of both outcomes and indicators to the specific categories of subjects, stakeholders and SF considered can be required.

There are two types of SROI analysis (Nicholls *et al.*, 2009): evaluative, conducted ex-post and based on outcomes already achieved; and, predictive, to predict how much social value will be created if the activities achieve the expected outcomes. In view of the cyclic periodicity of the "I frutti della buona terra" project, which has been replicated yearly since 2017 on different user groups, in the present study the SROI analysis has been implemented by integrating both types of analysis. An evaluative SROI analysis was carried out on the three cycles that have already been implemented (in 2017, 2018, and 2019) and a predictive SROI analysis was estimated as a scenario for the next yearly cycles, in view of the possible extension of the project for a second three-year period.

This study has been carried out on 13 participants to the project in the three years considered, with 2 users participating to more than one year cycle, and has considered all stakeholders directly or indirectly involved in the project, i.e. the users, the project proposer (Agricoltura Capodarco), project partners (Velletri municipality and Ser.D.), the small farms where the users had their training and working stages, and the environment. The latter has been included as a stakeholder following the UN Universal Declaration on the Rights of Mother Earth, (law on the Rights of Mother Earth, law 71 of December 2010 [Universal Declaration of Rights of Mother Earth, 2010]) and recent studies (Stone, 2010; Boyd, 2011, 2012; Carducci, 2017), which indicate the environment as a subject with legal personality.

For all stakeholder categories, except the environment, data collection has been carried out through guided questionnaires addressed to all the stakeholders, who gave the availability for the interview and participating to the study. Interviewed were all but two users, the staff of Agricoltura Capodarco and of the small companies involved in the projects, representatives of the Velletri municipality and of the Ser.D. All major actors from every stakeholder category involved in the "I frutti della buona terra" project but two have accepted to be interviewed. A total of 21 people were interviewed: 11 of the 13 recipients, one Agricoltura Capodarco social educator, who was managing the project, the responsible for these kind of actions in the Velletri municipality, two social workers of the Velletri Ser.D. and the six responsible of the farms involved.

The outcomes of both evaluative and predictive SROI have been identified through the answers to the guided questionnaires. Content analysis was done manually and focused on the meaning and semantic relationship of words and concepts regarding indicators. Proxies and proxy financial quantification were derived from the interviews and from the available literature, including the project documentation of "I frutti della buona terra".

4. THE RESULTS

Within the project, the stakeholders identified have different roles: the users, represented by the patients under treatment at the Ser.D. of Velletri, which are the main beneficiaries of the project, Agricoltura Capodarco, the Municipality of Velletri, the Ser. D of Velletri, who designed and implemented the project, and private companies, as they offer the internships to the users and supply them with training. Even if most are service providers, only the Municipality of Velletri is financing the project, with an investment of € 100,343.33 per year.

The identification of the outcomes, the indicators and the financial proxies represent the first results of this study, they are shown in Table 1.

Interviews with users showed that for all of them the major changes (i.e., outcomes) detected are improved quality of life, greater likelihood of finding a job and less social isolation.

The results on users were estimated on a quantitative analysis of the following indicators and proxies:

1. The improvement of the quality of life derives both from economic factors, such as payment deriving from the internships, and psychological factors, which have always weighed on this type of subjects, having led most of their lives in degraded situations. The indicator used to assess this outcome is precisely the amount of money gained from the work grant (internship), with which they can live a more comfortable life.
2. Users are most likely to find a job because they have learned new job skills within this project. In addition, most have said they had good relationships with colleagues and employers, and this has conveyed greater self-confidence, as they now feel able to face interviews, or at least find themselves in new job situations. The approach chosen for the measurement and the choice of this indicator is the number of contracts that have been signed by users after participating in the project. The proxy used is the salary received by the users who have found a job. Since this is a probability, the ratio between the people who found work and all those who participated in the project was calculated and multiplied by the average salary observed.
3. The reduction of social isolation derives from the fact that all users have stated that they feel mentally better, that they have greater self-esteem and that they feel like they have developed friendships, as well as professional relationships within the project. In some cases, they stated that they have started to get out of their home again, to go to the supermarket and to take public transport. All these factors demonstrate an improvement in people's psychological state, which has enabled them to emerge, at least in part, from the social isolation they were in. The approach to evaluation is given by the lower number of sessions for psychological recovery and it is calculated by estimating the average cost of these sessions.

The return of the Capodarco Cooperative has been estimated from the outcome of an interview with the tutor of the Capodarco Agriculture Cooperative, from which it emerged that the greatest benefit obtained by the cooperative is the increase in social value deriving from the successful placement of jobs. This certainly derives from the fact that the company's mission is precisely to help people who find themselves in harsh positions to live a more comfortable life. The indicator chosen is the number of successful social work entries and as a proxy, the cost savings for the tutor, who will be able to follow new users.

The return for Ser.D. has been estimated based on the social and work integration of the users, defining the outcome on the reduction of the probability that the users have a relapse into their addiction. The interviews carried out with a social worker allowed to define as an economic proxy the reduction of costs to prevent the spread of infectious diseases typical of this category of subjects, such as HIV and hepatitis C. This indicator has been estimated in a predictive way, given the small number of users analyzed, and is calculated on the average number of hospital admissions for this category of subjects. The measurement is given by the probability that a Ser.D. patient has contracted the disease, multiplied by the average cost of hospitalization. Previous literature shows that the lower probability of a relapse may result in a lower cost of medicines, resulting from the lower use in more advanced phases of therapy, which is another indicator used to calculate the outcome described above (Serpelloni, 2006). The proxy that represents this indicator, and allows us to measure it, is the cost of medicines used in therapy. Finally, a final indicator that can be used is that of the cost savings resulting from the

Tab. 1. Impact Map.

Stakeholder	Input	Outcome	Index	Possible proxy	Economic value
Users		Improving quality of life	Access to work grant	Salary from work grant	400€*month*users= 68,000€
		Higher probability of finding a job	Post-employment grant contract	Post-sale contract salary	800€*month*0,059 user 450€*month*0,059 user =10,588.2€
		Reduction of social isolation	Number of sessions psychological recovery	Lower social costs psychological recovery	15€*month*user= 1,650€
Cooperative of Capodarco		Increased company social value	Number of social and work placements	Savings in tutoring costs	67,76€*month*user = 67,76€*10*2= 1,355.2€
Farms		Decrease in production costs	Traineeships through work grant	Labour cost savings	400€*month*user = 68,000€
		Increased reputation	Increased sales	Higher revenues	0,05* user labour cost =3,400€
Ser.D.		Reduced probability of relapse for patients	Number of visits to the doctor	Cost of medical examination	40*4=160*user = 2,720€
			Reduction in the use of medicines	Cost of medicines	Da 0*day*month = 0€
					A 0,9€*day*user= 4,590€
			Reduction number of admissions	Cost of hospitalizations for infectious diseases	1024€x0,054= 55,30€
Environment		Increased incidence of organic farming	More careful management of natural resources and less use of chemical inputs	Reduction of environmental risks	10€*month*user = 200€
					1099€*ht*year = 1099€*10*3= 32,970€
			Lower CO2 emissions	Reduction of CO2 emissions	Economic value not estimated by company size and type
		Expansion of Social Farming Practices	Reduction of abandoned land	Better hydro-geological control and less fire risk	Economic value not estimated by company size and type
Municipality of Velletri	Project funding over 3 years = € 100,343.33	Reduced likelihood of this category committing offences and entering the prison system	Lower detention costs	Cost of an inmate to the local prison system	0,0128*user*daily cost*year= 9,831.50€
		Reduction of drug purchase	Reduced use of drugs	Drug costs	68€*day/week*user = from 38,896€ to 272,272€
		Creation of active workers	More money injected into the local economy	Percentage of salary spent in the local community	0,8*400€*month* user = 54,400€

Source: our elaboration.

fewer medical examinations that individuals must do because of their health situation.

For the Municipality of Velletri, intended not only as a public institution, but also as a landmark of the local community and as the place of residence of the subjects, the return on investment was measured on three different outcomes that express an important social benefit coherent with what was stated in the inter-

view by the head of the H5 Zone Plan of the Municipality of Velletri:

1. The decrease in drug related crimes of this category of users, which now are receiving a salary and are less propense to relapse into addiction. The indicator used was the lower cost of imprisonment that the local prison system has to bear, and was measured by the proxy that expresses the ratio between the number of drug addicts held annually in the Italian prison system and the total number of drug addicts in Italy. The results are multiplied by the average daily cost per inmate and then multiplied by the number of days in a year.
2. The decline in purchases of drugs on the black market. The indicator proposed to measure this is the change in the cost of drugs on the market (Serpelloni, 2006). Two different proxies have been calculated depending on the conservativeness of the valuation. The most conservative is based on addicts who use weekly, the less conservative is based on addicts who use daily. The cost of the dose is then multiplied by one year and by the number of users in the study.
3. The creation of an active population, considering that prior to the project the subjects have not had a job, let alone were looking for it, for a long time. It has been calculated through the proxy that expresses the percentage of income that subjects are estimated to spend within the community about 80% of the salary received from the work grant.

Regarding the companies offering the internship service, as mentioned in the previous chapter, their benefit is to have an unpaid worker available to them. Their benefit is the saving of labor costs, which was calculated by multiplying the income, assuming that they would pay a worker for the same hours performed by users with the same salary, multiplied by the number of months and by the number of users. Another benefit that could be seen is a slight increase in sales caused by the so-called reputational effect. It was calculated through an estimate of the 5% increase in companies' revenues, which in the absence of data were estimated to be at least equal to the labor costs.

Finally, interviews with the two farmers who have organic farms showed how Social Farming projects can have important effects on the environment. As organic farming has very high production costs, especially when compared to the large scale costs of traditional large farms, the economic benefits of participating in projects such as the one under study could be an incentive to shift local agricultural production more towards organic products. This would cause an increase in the benefits that derive from organic production, such as the decrease in environmental risks caused by xenobionts which are released from chemicals used as pesticides in traditional agricultural production and slow down the decomposition of organic matter. Another positive effect in organic farming is the decrease in CO2 released into the atmosphere by the chemicals used. The negative effect of xenobionts on soil and water bacteria, and micro fungi can be estimated as a 10% loss of the decomposition rate of dead organic matter (Abelho *et al.*, 2016) which can affect the release of 70% of the nutrients it contains, net of the 30% loss due to leaching. A 7% reduction in ecosystem service "nutrient cyclization" can therefore be estimated at € 15,715 per hectare as an average in the biosphere (Costanza *et al.*, 1997).

Once the values of the various outcomes have been calculated, 10% of the value is subtracted for those outcomes that could also occur outside the project, i.e. for:

- Increase in revenues for companies deriving from the reputational effect, as part of it may not even derive from the AS project in which they participated.
- Reduction of the probability to relapse since it is presumable that part of this change could have occurred even without participation in the project.
- Reduction in the probability of this category committing drug-related crimes, as it is presumable that the category under study does not fall into addiction beyond the participation or non-participation in the project, it is equally presumable that they do not commit crimes.
- Reduction in the purchase of drugs, as the same considerations have been made for the two points preceding this one.

No drop-off value has been subtracted because the longer the duration of the change, the greater the effect of the outcome.

Before proceeding with the calculation of the SROI indicator we summarize the total economic values, net of deadweight values, by stakeholder category (Tab. 2).

According the SROI, economic benefits are those with a remuneration or cost savings, social benefits those with an effect on the quality of life of stakeholders or the local community and, finally, environmental benefits are those with positive effect on natural capital.

Therefore, the category of users has a total benefit of € 80,238.2, resulting from an economic benefit of 68,000, corresponding to the value of wages earned (Tab. 1), and a social benefit of € 12,238.2 resulting from the sum of the values corresponding to the greater probability of finding work in the future and the reduction of social isolation. "Agricoltura Capodarco" Cooperative presents a total benefit of € 1,355.2 composed solely of the economic dimension, as it corresponds to the value deriv-

Tab. 2. Value of benefit for each stakeholder net of deadweight values (10%) and according to the more conservative hypothesis of a reduction in drug purchase spending at a rate of 1 dose per week.

Stakeholder	Economic benefit	Social benefit	Environmental benefit	Total
Users	68,000	12,238.2		80,238.2
Agricoltura Capodarco	1,355.2			1,355.2
Farms	71,060			71,060
Ser.D. Velletri		6,628.77		6,628.77
Environment			33,170	33,170
Municipality of Velletri		98,254.75		98,254.75
	140,415.2	117,121.72	33,170	290,706.92

Source: our elaboration.

ing from the lower cost of tutoring, written off by 10%. The farms also present a total benefit composed entirely of the economic dimension, as it corresponds to the value of the savings on the cost of the worker. The Ser.D of Velletri and the Municipality of Velletri, on the other hand, present a total benefit of € 7,365.3 and € 103,127.5 respectively, composed for both entirely of the social dimension. These results are due to the outcomes identified for these stakeholders that have effects on the local community and on the users' sociality. The economic values of these outcomes have been subtracted from the 10% resulting from deadweight. The environment has a total benefit of 33,170, easily identifiable as an environmental benefit.

The net social return, according to the most conservative hypothesis, which is calculated by subtracting the value of the inputs (€ 100,343.33), corresponding to the value of the initial investment by the Municipality of Velletri, from the total outcome (€ 290,706.92), is therefore € 190,363.59, with a SROI index value of 1.89 (net social return/initial investment).

In this conservative estimate, which considers the consumption of one dose per week by an average user, the SROI ratio will have a measure of 1: 1.89, which means that for every euro invested within the project, there will be a social return on investment of one euro and eighty-nine cents. Estimating instead the daily consumption, instead of weekly, of one dose per user, the SROI ratio would have a measure of 1: 3.99, with a social return of four euros and ten cents for each euro invested.

5. DISCUSSION OF RESULTS AND CONCLUSIONS

The study aimed to evaluate the overall value of SF as a tool for the inclusion of disadvantaged groups of population. In this approach, the work represents an important source of livelihood for these people and an opportunity to facilitate their social inclusion**.** Indeed, the overall value of Social Farming must necessarily combine the economic report of the worker and the company with a social report that considers the effects or changes (outcome) on all the stakeholders involved. For this reason, the Social Return on Investment methodology, which appears to be the most suitable and applied in kind of studies, was applied in the study. The importance of this methodology lies in the fact that it seeks to give an economic value to those social benefits that was previously difficult to estimate and subjected of strong bias or even distortion in the assessment of associated values (Arvidson *et al.*, 2013).

The results obtained show first of all that, depending on the conservatism of the estimates described above, the SF project shows a social return on investment of € 1.89 or € 3.99 for each euro invested. Secondly, it should be noted that around the 90% of the total social return on investment is concentrated on three categories of stakeholders, the disadvantaged people, the companies offering the internship service and the local community, indicating a wide and distributed social impact of the investment. This also shows how SF projects are important for the personal growth, not only for the users but also for the community of which they are part. In fact, the data concerning the users offers a very positive picture, reflected in the improvement of their quality of life, both from an economic, thanks to the salary that allows them to live a more comfortable life, and from a social point of view thanks to the numerous professional and friendship relationships that they have been able to develop within the project and have allowed them to have a lower level of social isolation.

The analysis of sustainability in its three dimensions, social, economic and environmental, emphasizes that as regards "I frutti della buona terra" project almost all sustainability is given by the social and economic dimensions, and just slightly more than 10% by the envi-

ronmental dimension. These results arise both from the nature of the project and from the limited connection in this study case between SF and organic production.

From the results obtained two different critical points emerged. As regards the methodological aspects of SROI, it can be highlighted that still the methodology on the choice of financial outcomes and proxies is not fully standardized, with potential biases due to some level of subjectivity in the analysis. For this reason, when the quantification of the proxies was not already standardized or supported by consolidated literature values, proxies have been quantified as potential range of variation rather than with an average value, as for the return expected from reduced use of drugs, and the most conservative estimate was used in the evaluation. Therefore, this analysis has added something to what already done for the standardization of the SROI methodology, particularly when applied to users affected by drug dependency. As regards the user category, the study has highlighted that the number of users who had managed to get a permanent job as outcome of the project is still extremely limited. These results raise the point on whether the sustainability is equal in the short and long term.

The results obtained do not seem to depend on the methodology used or on bias and uncertainty in the economic estimates of the social return on investment, which may cast doubt on their overall meaning. In fact, as far as the methodology is concerned, the choice of the outcomes, of the characteristics that have undergone a change linked to the SF project, has been defined on the basis of the stakeholders' responses to specific interviews and of the consistency of the responses given by the different stakeholders. The choice of indicators and proxies was therefore made accordingly, with the support of existing bibliographical indications. The outcomes vary according to the range of subjects studied (drug addicts, patients with mental and physical health problems, prisoners) (Leck, 2014; Arvidson *et al.*, 2013), and therefore there remains some uncertainty about the choice of outcomes in this study. This stems from the fact that for the choice of outcomes there is no shared methodology (Leck, 2014), but, as mentioned above, it is based on studies in the literature, which for the category of users studied is still limited. With regard to the quantification of the economic values of the changes, for which there is undoubtedly uncertainty in the estimates, the consistency of the results obtained is supported by the fact that the social return on investment is concentrated on three components – workers, companies offering work and local communities – so that the estimate of the economic value of the change, at least in the specific case of the study, is only minimally subject to uncertainty as the calculation of the values at stake is standardized (salaries to employees) or very well documented in the literature (unit cost drug dose and weekly number of doses consumed). For this last aspect, the design choice to estimate a weekly dose consumption was particularly conservative.

In conclusion, this work allows to extend the evidence of the important role of SF for people with dependencies, so far little studied. Moreover, the methodology was particularly suitable for the study of the SF activities addressed to the category under study and in general for the study of sustainability in its three components, allowing us to understand which component has the greatest impact on the result, and on which one should act on. However, the work presents some limitations due to the small sample size and to the innovative nature of the proposed methodology, which makes comparison with other results difficult. In any case, its purpose was to provide an example of the application of the SROI to the phenomenon of social farming, which will certainly have to be deepened and improved in future research work.

In order to respond to the critical issues arising from this study regarding inclusion processes, a stronger mechanism of protection by local and national governments could be introduced, with the aim of increasing the probability of post-employment by putting users in a position of greater bargaining power in the labour market. Moreover, a greater involvement of organic farms could create a much stronger social return in environmental sustainability.

6. REFERENCES

Abelho M., Martins T.F., Shinn, C., Moreira-Santos M., Ribeiro, R. (2016). Effects of the fungicide Pyrimethanil on biofilm and organic matter processing in outdoor lentic mesocosms. *Ecotoxicology,* 25: 121-131. https://doi.org/10.1007/s10646-015-1574-x.

Ahmadvand M., Karami E., Zamani G.H., Vanclay F. (2009). Evaluating the use of Social Impact Assessment in the context of agricultural development projects in Iran. *Environmental Impact Assessment Review*, 29(6): 399-407. https://doi.org/10.1016/j.eiar.2009.03.002

Arvidson M., Lyon F. (2010). *The ambitions and challenges of SROI University of Southampton University of Birmingham*. Social Research.

Arvidson M., Lyon F., McKay S., Moro D. (2013). Valuing the social? The nature and controversies of measuring Social Return on Investment (SROI).

Voluntary Sector Review, 4(1): 3-18. https://doi.org/10.1332/204080513X661554.

Bastiani M. (2014). Stop the growth of cities: the role of marginal agricultural areas between river and city as a territorial protection and in the reduction of Hydro-geological risk. *Scienze Del Territorio*, 2(0): 55-78. https://doi.org/10.13128/Scienze_Territorio-14323

Becker H.A. (2001). Social impact assessment. *European Journal of Operational Research*, 128(2): 311-321. https://doi.org/10.1016/S0377-2217(00)00074-6

Bonazzi G., Iotti M. (2005). *Analisi per indici nell'impresa agraria.* Annali Facoltà Medicina Veterinaria di Parma 25.

Borgi M., Marcolin M., Tomasin P., Correale C., Venerosi A., Grizzo A., Orlich R., Cirulli F. (2019). Nature-Based Interventions for Mental Health Care: Social Network Analysis as a Tool to Map Social Farms and their Response to Social Inclusion and Community Engagement. Int*ernational Journal of Environmental Research and Public Health*, 16(18): 14-16. https://doi.org/10.3390/ijerph16183501

Borgi M., Collacchi B., Correale C., Marcolin M., Tomasin P., Grizzo A., Orlich R., Cirulli F. (2020). Social farming as an innovative approach to promote mental health, social inclusion and community engagement. *Annuali dell'Istituto Superiore della Sanità*, 56: 206-214. https://doi.org/10.4415/ANN_20_02_10

Boyd D. (2011). *The Environmental Rights Revolution, A Global Study of Constitutions, Human Rights, and the Environment*. UBC Press, Vancouver-Toronto. https://doi.org/ 10.1353/hrq.2013.0061

Boyd D. (2012). *The Rights of Nature: A Legal Revolution That Could Save the World*. ECW Press, Carducci M. (2017). Diritti della natura. Utet Giuridica, pp 486-581. https://doi.org/10.1285/i22840753n11p41

Casini L. (2009). *Guida per la valorizzazione della multifunzionalità dell'agricoltura.* Firenze University Press, Firenze. https://doi.org/10.26530/oapen_343709

Clark W., Tomich T., Van Noordwijk M., Guston D., Catacutan D., Dickson N., Mcnie E. (2016). Boundary work for sustainable development: Natural resource mnagement at the Consultative Group on International Agricultural Research (CGIAR). *Proceedings of the National Academy of Sciences of the United States of America*, 113(17): 4615-4622. https://doi.org/10.1073/pnas.0900231108

Cordes, J. J. (2017). Using cost-benefit analysis and social return on investment to evaluate the impact of social enterprise: Promises, implementation, and limitations. *Evaluation and Program Planning*, 64: 98-104. https://doi.org/10.1016/j.evalprogplan.2016.11.008

Costanza R., d'Arge R., de Groot R., Farber S., Grasso M., Hannon B., Limburg K., Naeem S., O'Neill R.V., Paruelo J., Raskin R.G., Sutton P., van der Belt M. (1997). The value of the world's ecosystem services and natural capital. *Ecological Economics*, 25(1): 3-15. https://doi.org/10.1016/s0921-8009(98)00020-2

Deacon B. (2016). SDGs, Agenda 2030 and the prospects for transformative social policy and social Development. *Journal of International and Comparative Social Policy*, 32(2): 79-82. https://doi.org/10.1080/21699763.2016.1200112

Di Iacovo F. (2020). Social Farming Evolutionary Web: From Public Intervention to Value Co-Production. *Sustainability*, 12: 3390-5269. https://doi.org/10.3390/su12135269

Foti V.T., Scuderi A., Timpanaro G. (2013). Organic social agriculture: A tool for rural development. *Quality - Access to Success*, 14(suppl. 1): 266-271.

Fujiwara D., Campbell R. (2011). *Valuation Techniques for Social Cost-Benefit Analysis: Stated Preference, Revealed Preference and Subjective Well-Being Approaches – A Discussion of the Current Issues*. London: HM Treasury.

García-Llorente M., Rubio-Olivar R., Gutierrez-Briceño I. (2018). Farming for life quality and sustainability: A literature review of green care research trends in Europe. *International Journal of Environmental Research and Public Health*, 15(6): https://doi.org/10.3390/ijerph15061282

Giarè F., Borsotto P., De Vivo C., Gaito M., Pavoncello D., Innamorati A. (2017). *Rapporto sull'Agricoltura Sociale in Italia.* Rete Rurale Nazionale 2014-2020.

Giarè F., De Vivo C., Ascani M. (2018). L' agricoltura sociale : un modello di welfare generativo. *Italian Review of Agricultural Economics*, 73(2): 125-146. https://doi.org/10.13128/REA-24079

Giarè F. (2019) *L'attuazione dell'Agricoltura Sociale nella programmazione 2014-2020 della politica di sviluppo rurale.* INEA.

Hassink J., Hulsink W., Grin J. (2016) Entrepreneurship in agriculture and healthcare: different entry strategies of care farmers. *Journal of Rural Studies*, 43: 27-39. https://doi.org/10.1016/j.jrurstud.2015.11.013

Henle K., Alard D., Clitherow J., Cobb P., Firbank L., Kull T., McCracken D., Moritz R., Niemela J., Rebane M., Wascher D., Watt A., Young J. (2008). Identifying and managing the conflicts between agriculture and biodiversity conservation in Europe-A review. *Agriculture Ecosystems & Environment*, 124(1-2): 60-71. https://doi.org/10.1016/j.agee.2007.09.005

Janker J., Mann S. (2020). Understanding the social dimension of sustainability in agriculture: a critical

review of sustainability tools. *Environment, Development and Sustainability,* 22(3): 1671-1691. https://doi.org/10.1007/s10668-018-0282-0

Lanfranchi M., Giannetto C., Abbate T., Dimitrova V. (2015). Agriculture and the social farm: expression of the multifunctional model of agriculture as a solution to the economic crisis in rural areas. *Bulgarian Journal of Agricultural Science*, 21: 711-718.

Leck C. (2012). *Social Return on Investment (SROI) evaluation report of the Houghton Project*. Report, University of Worcester, Worcester, August.

Leck C., Upton D., Evans N. (2016). Social Return on Investment: Valuing health outcomes or promoting economic values?. *Journal of Health Psychology*, 21(7): 1481-1490. https://doi.org/10.1177/1359105314557502

Legge n. 381. (1991). *Disciplina delle cooperative sociali,* Italia.

Legge n.14. (2007). *Tutela e valorizzazione del paesaggio degli ulivi monumentali*, Puglia.

Legge n.71. (2010). *Universal Declaration of Rights of Mothers Earth*, United Nations.

Legge n.141. (2015). *Disposizioni in materia di Agricoltura Sociale*, Italia.

Legge n.7. (2018). *Disposizione per la semplificazione e lo sviluppo regionale*, Lazio.

Marchis J., Bortoluzzi S.C., De Lima E.P., Da Costa S.E.G. (2019). Sustainability performance evaluation of agricultural cooperatives' operations: a systemic review of the literature. *Environmental, Development and Sustainability*, 21(3): 1111-1126 https://doi.org/10.1007/s10668-018-0095-1

Mulgan, G. (2013). Measuring Social Value: What do we mean by measuring social value? *Stanford Social Innovation Review*, 2010: 1-7.

Nicholls J., Lawlor E., Neitzert E., Goodspeed T. (2009). *Guida al Ritorno Sociale sull'Investimento.* Human Fondation, OECD, 2000.

OECD (2001). *Multifunctionality: Towards and Analytical framework*. OECD Publications Service, France.

Scherr S., McNeely J. (2008). Biodiversity conservation an agricultural sustainability: towards a new paradigm of "ecoagriculture" landscapes. *Philosophical transactions of the Royal Society B: Biological Sciences*, 363(1491): 477-494. https://doi.org/10.1098/rstb.2007.2165

Scuderi A., Timpanaro G., Cacciola S. (2014). Development policies for social farming in the EU-2020 Strategy. *Quality - Access to Success*, 15(139): 76-82.

Serpelloni M., Gamma M. (2006). *Analisi Economica dei dipartimenti e delle dipendenze: prima analisi dei costi e valorizzazione dei risultati.*

Stone C. (2010). *Should threes have standing? Law, Morality, and the Environment*, Third Edition. Oxford University Press.

Tayleur C., Balmford A., Buchanan G., Butchart S., Ducharme H., Green R., Milder J., Sanderson F., Thomas, D., Vickery J., Phalan B. (2016). *Global Coverage of Agricultural Sustainability Standards, and Their Role in Conserving Biodiversity*. Conservation Letter. https://doi.org/10.1111/conl.12314.

Toronto EESC (2013). *Opinion of the European Economic and Social Committee on 'Social farming: green therapies and social and health policies'*. Official Journal of the European Union C44/44.

Torquati B., Stefani G., Massini G., Cecchini L., Chiorri M., Paffarini C. (2019). Social farming and work inclusion initiatives for adults with autism spectrum disorders: A pilot study. *NJAS – Wageningen Journal of Life Sciences*, 88 (February 2018): 10-20. https://doi.org/10.1016/j.njas.2019.02.001

Tulla A.F., Vera A., Valldeperas N., Guirado C. (2018). Social Return and economic viability of social farming in Catalonia: a case study analysis. *European Countrys*, 10(3): 398-428. https://doi.org/10.2478/euco-2018-0023

Zamagni S., Venturi P., Rago S. (2015). Valutare l'impatto sociale. La questione della misurazione delle imprese sociali. *Rivista Impresa Sociale,* 6(12): 77-97.