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Methodological approaches to evaluating the impacts of Social Farming

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Abstract

L'Agricoltura Sociale è definita come una pratica di sviluppo locale sostenibile dal punto di vista sociale, ambientale ed economico, che offre servizi volti a perseguire il benessere delle popolazioni, secondo principi sociali e solidali. Questa definizione nasce dal concetto di multifunzionalità, secondo cui il settore agricolo va oltre la funzione "tradizionale" di produzione di beni destinati al mercato.

L'agricoltura sociale è sempre più presente nei documenti di politica - non solo agricola - e nei dibattiti promossi da operatori e studiosi. Infatti, essa è diventata una componente sempre più rilevante nelle politiche nazionali e internazionali grazie al suo potenziale nell'affrontare sfide cruciali come lo sviluppo rurale sostenibile, l'inclusione sociale, la difesa della salute e del benessere, la conservazione dell'ambiente e la coesione comunitaria. La crescente attenzione verso l'agricoltura sociale dimostra il valore che negli anni questo insieme di pratiche ha avuto sia in termini di benefici per le persone coinvolte sia in termini di miglioramento dei servizi offerti a livello locale.

Sebbene l'importanza delle pratiche di agricoltura sociale sia ormai consolidata in letteratura, mancano ancora strumenti di monitoraggio e valutazione di queste pratiche. L'assenza o il numero limitato di studi sulla sua valutazione, causa una mancanza di dati e di informazioni sui risultati relativi alle esperienze e agli impatti che l'agricoltura sociale ha sugli utenti, sulle comunità locali, sui soggetti attuatori e sull'ambiente. Inoltre, senza una metodologia efficace, in grado di quantificare i benefici sociali e ambientali derivanti dall'agricoltura sociale, è difficile capire in che misura queste pratiche possano contribuire al raggiungimento degli obiettivi di sostenibilità e sviluppo rurale.

In questo contesto, gli obiettivi di questa tesi sono:

- fornire una metodologia di valutazione che possa essere efficace per lo studio e la quantificazione degli impatti sociali, ambientali ed economici dell'agricoltura sociale su tutte le categorie di utenti. In questo modo si contribuisce a fornire nuove applicazioni sulla valutazione dell'agricoltura sociale, che ad oggi scarseggiano in letteratura. A tal fine, l'obiettivo intermedio

è fornire una panoramica delle metodologie utilizzate in letteratura per quantificare gli impatti dell'agricoltura sociale;

- testare l'adattabilità della nuova metodologia proposta, quando si utilizza un'inedita integrazione di diverse metodologie di valutazione quali-quantitative. Ciò avviene attraverso un confronto e una sintesi dei diversi risultati, in modo da superare gli eventuali limiti della singola metodologia di valutazione (qualitativa/quantitativa) coinvolta;

- indagare il contributo che l'agricoltura sociale può portare al raggiungimento degli obiettivi di sostenibilità, sviluppo rurale e generazione di benessere, attraverso il confronto tra gli obiettivi specifici degli SDGs e gli indicatori sociali e ambientali individuati nelle valutazioni di impatto della metodologia proposta.

- dare risalto agli impatti sociali e ambientali prodotti dall'agricoltura sociale attraverso la loro quantificazione monetaria. Ciò contribuisce a fornire informazioni e a supportare i responsabili delle politiche sociali, sanitarie e di welfare nelle loro azioni.

In questa tesi sono state utilizzate diverse metodologie per valutare in modo completo e con successo le pratiche di agricoltura sociale. Il Social Return on Investment (SROI) viene utilizzato (capitoli 2 e 4) per quantificare i benefici sociali ed economici derivanti dai progetti di agricoltura sociale. Inoltre, viene ulteriormente combinato con altre tre metodologie (capitolo 4). Queste sono: l'analisi SWOT, per valutare il contesto socio-territoriale all'interno del quale i progetti valutati sono stati implementati (analisi SWOT); il Business Model Canvas, per valutare il modello di business dei diversi leader di progetto, per capire se la differenza nei modelli di business possa essere una variabile che influisce sui risultati finali della valutazione; l'Analytic Hierarchy Process, per realizzare un'analisi di sensibilità per la metodologia SROI e osservare i diversi pesi che i diversi attori assegnano ai risultati identificati nell'analisi SROI. Infine, la metodologia PRISMA è stata utilizzata per effettuare un'analisi sistematica della letteratura (capitolo 3), al fine di indagare quali metodi sono stati utilizzati nella valutazione dell'agricoltura sociale in letteratura e i limiti di tali metodi quando applicati a queste pratiche.

Per quanto riguarda i risultati, il capitolo 2 offre, per la prima volta in Italia, un'applicazione del Social Return on Investment (SROI) per quantificare gli impatti sociali e ambientali dell'agricoltura sociale.

L'obiettivo di questo lavoro è studiare la sostenibilità dell'agricoltura sociale, con un focus sulle pratiche rivolte a persone con dipendenze, una categoria di soggetti per la quale non esistono ancora studi in letteratura. I risultati mostrano, innanzitutto, la sostenibilità del progetto, riscontrando un ritorno sociale dell'investimento pari a 1,89 euro per ogni euro investito. Questo valore è fortemente caratterizzato dalla componente sociale, che rappresenta il 60% del risultato. Inoltre, l'importanza dell'agricoltura sociale è dimostrata anche dagli impatti che produce per la categoria di utenti oggetto di studio, in termini di qualità della vita, ma anche di riduzione del rischio di ricaduta e del rischio di ingresso nel sistema carcerario. Questi impatti si riflettono anche su tutti gli stakeholder del progetto, dalla cooperativa agricola proponente, alle aziende agricole che ospitano i periodi di formazione, ai servizi sanitari competenti e all'intera società. Tuttavia, questo lavoro ha anche evidenziato alcune aree critiche che devono essere affrontate per migliorare l'implementazione di tali progetti, come la bassa probabilità di successo dei progetti in termini di inserimenti lavorativi. La metodologia proposta è risultata adeguata per quantificare gli impatti sociali e ambientali prodotti dall'agricoltura sociale, anche se ha mostrato alcuni limiti dovuti più che altro alla mancanza di dati in letteratura e di applicazioni simili.

Il capitolo 3 offre una panoramica completa sulla valutazione dell'agricoltura sociale in generale e, più in particolare, sull'uso del Social Return on Investment per la valutazione di queste pratiche. L'obiettivo di questo lavoro è stato, in primo luogo, quello di aumentare la conoscenza di chi sono i soggetti (stakeholder) che sono coinvolti nella valutazione dell'agricoltura sociale e, in secondo luogo, di standardizzare gli indicatori e le proxy utilizzate nell'applicazione dello SROI in letteratura, al fine di trovare una metodologia condivisa. Questo studio ha evidenziato, da un lato, l'importanza del tema e, dall'altro, il numero limitato di applicazioni delle metodologie di valutazione all'agricoltura sociale. Nonostante l'esiguo numero di lavori selezionati (9 in totale), è stato possibile effettuare una prima

standardizzazione per quanto riguarda il processo di coinvolgimento degli stakeholder, l'identificazione degli indicatori per le categorie di stakeholder degli utenti, delle aziende agricole e della società (comunità locale) e il valore dell'indice SROI. In particolare, gli stakeholder identificati in tutti i documenti analizzati sono: gli utenti (destinatari), gli attori proponenti, le aziende agricole che offrono il servizio di collocamento, le istituzioni locali, i servizi sanitari e sociali locali e la comunità locale. Per quanto riguarda l'identificazione degli indicatori in tutti i documenti selezionati, per la categoria degli utenti sono stati utilizzati gli indicatori "accesso alla borsa lavoro", "numero di contratti dopo la borsa lavoro" e "risparmio sul recupero psicologico" per quantificare il miglioramento della qualità della vita, la maggiore probabilità di trovare lavoro e la riduzione dell'isolamento sociale; per le aziende agricole l'indicatore "minori costi di produzione" per quantificare il miglioramento dovuto a un costo non sostenuto per un lavoratore; e per la comunità locale "percentuale di salari spesi nella comunità" e "minori sussidi" per quantificare la creazione di una popolazione attiva e la diminuzione del tasso di disoccupazione.

Il capitolo 4 propone l'applicazione di un nuovo approccio di valutazione attraverso l'integrazione di quattro metodologie quali-quantitative. Il campione, che nella prima applicazione corrispondeva a un solo progetto, viene qui esteso a otto progetti. Questo, presentando un numero maggiore di osservazioni totali, è quindi più rappresentativo delle esperienze di agricoltura sociale. Inoltre, con questa applicazione, la comprensione e la quantificazione degli impatti viene estesa a tutte le categorie di utenti per la prima volta in letteratura. Questo lavoro mostra l'importanza di combinare la metodologia SROI con altri metodi che possono aiutare a comprendere i risultati e a superare alcuni limiti specifici. L'analisi SWOT e il Business Model Canvas sono utilizzati come fase preliminare per indagare se il contesto territoriale e il tipo di soggetto proponente del progetto siano variabili che influenzano il risultato. L'Analytic Hierarchy Process viene poi utilizzato come analisi di sensibilità per superare eventuali sovrastime del risultato. La valutazione mostra un ritorno sociale dell'investimento che oscilla tra 1,10 e 1,70 per euro investito, dimostrando l'importanza di tali pratiche per tutte le categorie di utenti e tutti gli stakeholder coinvolti. Inoltre,

si evidenziano alcune differenze nei risultati derivanti dal contesto territoriale (urbano, periurbano, rurale), dal tipo di ente proponente (cooperativa agricola, cooperativa sociale, associazione e fondazioni) e dal tipo di categoria svantaggiata a cui si rivolge il progetto. Il processo di valutazione proposto è risultato adeguato per una comprensione totale dell'agricoltura sociale e una corretta quantificazione dei suoi impatti sociali, ambientali ed economici. Infine, l'importanza dell'agricoltura sociale nel raggiungimento degli obiettivi di sostenibilità è dimostrata attraverso il confronto tra gli obiettivi specifici degli Obiettivi di Sviluppo Sostenibile e i risultati e gli indicatori identificati durante il processo di valutazione.

In conclusione, il tema di ricerca di questa tesi, la valutazione dell'agricoltura sociale, è di grande importanza in Paesi, come l'Italia, dove l'agricoltura sociale è inclusa in diversi piani di sviluppo nazionali e regionali. La progettazione di un processo metodologico per quantificare gli impatti sociali e ambientali (oltre a quelli economici) che l'agricoltura sociale produce, può avere implicazioni significative per i sistemi economici e sociali. L'agricoltura sociale svolge un ruolo cruciale nel raggiungimento degli obiettivi di sviluppo rurale e nella creazione di un welfare rigenerativo. La sua valutazione è di grande importanza per cogliere le opportunità che questo fenomeno offre a livello internazionale, nazionale e locale, e per comprendere le aree di intervento che possono migliorare il sistema dell'agricoltura sociale. In particolare, è di primaria importanza la creazione di pratiche che mettano al centro il benessere dell'individuo per creare valore aggregato da più componenti, non solo quella economica, come testimoniato dall'Agenda 2030 delle Nazioni Unite. Gli indicatori e le misurazioni proposte in questa tesi offrono nuovi spunti di riflessione sui progressi compiuti nel campo della valutazione dell'agricoltura sociale. Oltre a evidenziare gli impatti sociali e ambientali prodotti dall'agricoltura sociale, questi indicatori e misure offrono una linea guida in termini di valutazione e monitoraggio per le autorità nazionali e locali.

Social Farming is defined as a local development practice that is socially, environmentally, and economically sustainable and offers services aimed at pursuing the well-being of the populations, in accordance with social and solidarity principles. This definition arises from the concept of multifunctionality, according to which the agricultural sector extends beyond the “traditional” function of producing goods made for the market.

Social farming is increasingly present in policy documents - not only agricultural - and in debates promoted by practitioners and scholars. Indeed, social farming has become an increasingly relevant component in national and international policies due to its potential in addressing crucial challenges such as sustainable rural development, social inclusion, health and welfare advocacy, environmental conservation and community cohesion. The growing attention towards social farming demonstrates the value that over the years this set of practices has had both in terms of benefits for the people involved and in terms of improving the services offered at the local level.

Although the importance of the social farming practices is well established in the literature there is still a lack of monitoring and evaluating tools of these practices. The absence or the limited number of studies on its evaluation, causes a lack of data and information on outcomes related to experiences and impacts that social farming has on users, local communities, the implementing actors, and the environment. Furthermore, without an efficient methodology that can quantify the social and environmental benefits derived from social farming, it is difficult to understand the extent to which these practices can contribute to the achievement of sustainability and rural development goals.

Whitin this context, the objectives of this thesis are:

- to provide an evaluation methodology that can be efficient for the study and quantification of the social, environmental, and economic impacts of social farming on all categories of users. This is thus contributing to provide new applications on evaluating social farming, which are scarce in the literature to date. To do this, the intermediate objective is to provide an overview of the methodologies used in the literature to quantify the impacts of social farming;

- to test the adaptability of the new proposed methodology, when using an unprecedented integration of different qualitative-quantitative evaluation methodologies. This is done through a comparison and synthesis of different results, so that the any limitations of the single (qualitative / quantitative) evaluation methodology involved can be overcome;
- to investigate the contribution that social farming can bring to the achievement of the objectives of sustainability, rural development, and welfare generation, through a comparison between the specific targets of the SDGs and the social and environmental indicators identified in the impact assessments of the proposed methodology.
- to emphasize the social and environmental impacts produced by social farming through their monetary quantification. This helps to provide information and support welfare, health, and social policymakers in their actions.

Several methodologies are used within this thesis in order to comprehensively and successfully evaluate the social farming practices. The Social Return on Investment (SROI) is used (chapters 2 and 4) to quantify the social and economic benefits deriving from social farming projects. Moreover, it is further combined with three other methodologies (chapter 4). Those are: the SWOT analysis, in order to assess the socio-territorial context within which the projects being evaluated were implemented (SWOT analysis); the Business Model Canvas, to assess the business model of the different project leader, to understand whether difference in business models could be a variable affecting the final evaluation results; the Analytic Hierarchy Process, to realize a sensitivity analysis for the SROI methodology, and observe the different weights that the different actors assign to the outcomes identified in the SROI analysis. Finally, the PRISMA methodology was used to carry out a systematic literature analysis (Chapter 3) in order to investigate which methods were used in the evaluation of social farming in the literature and the limitations of these methods when applied to these practices. Regarding the results, chapter 2 offers, for the first time in Italy, an application of Social Return on Investment (SROI) to quantify the social and environmental impacts of social farming.

The aim of this work is to study the sustainability of social farming, with a focus on practices aimed at people with addictions, a category of subjects for which there are not yet studies in the literature. This work shows, first of all, the sustainability of the project, finding a social return on investment of 1.89 euros per euro invested. This value is strongly characterized by the social component, which accounts for 60% of the result. In addition, the importance of social farming is also demonstrated by the impacts it produces for the category of users under study, in terms of quality of life, but also in terms of reduced risk of relapse and reduced risk of entering the prison system. These impacts are also reflected on all project's stakeholders, from the agricultural cooperative proposing the project, to the farms hosting the training periods, to the relevant health services and the whole society. However, this work also showed some critical areas that need to be addressed to improve the implementation of such projects, such as the low probability of success of the projects in terms of job placements. The proposed methodology was adequate for quantifying the social and environmental impacts produced by social farming, although it showed some limitations due more to the lack of data in the literature and similar applications.

Chapter 3 offers a comprehensive overview of the evaluation of social farming in general, and more specifically of the use of Social Return on Investment for the evaluation of these practices. The aim of this work was, first, to increase the knowledge of who are the subjects (stakeholders) that are involved in social farming evaluation, and second, to standardize the indicators and proxies used in the application of SROI in the literature, in order to find a shared methodology. This study highlighted, on the one hand, the importance of this topic and, on the other hand, the limited number of applications of evaluation methodologies to social farming. Despite the small number of selected papers (9 in total), an initial standardization could be carried out regarding the stakeholder engagement process, the identification of indicators for the stakeholder categories of users, farms and society (i.e., the local community) and the value of the SROI index. In particular, the stakeholders identified in all the analysed papers are: users (recipients), proposing actors, farms offering placement service, local institutions, local health and social services, and local community. With regard to the identification of indicators in all

selected papers, "access to the work exchange", "number of contracts after the work exchange" and "psychological recovery savings" were used for the users' category to quantify the improvement in the quality of life, the greater likelihood of finding work, and the reduction of social isolation; for farms the indicator "lower production costs" to quantify the improvement due to a cost not incurred for a worker; and for the local community "percentage of wages spent in the community" and "lower subsidies" to quantify the creation of a working population and the decrease in the unemployment rate.

Chapter 4 offers the application of a novel evaluation approach through the integration of four qualitative-quantitative methodologies. The sample, if in the first application corresponded to only one project, is here extended to eight projects. This, presenting a higher number of total observations, is thus more representative of social farming experiences. Furthermore, with this application, the understanding and quantification of impacts is extended to all user categories for the first time in the literature. This work shows the importance of combining the SROI methodology with other methods that can help to understand the results and overcome some specific limitations. SWOT analysis and the Business Model Canvas are used as preliminary step to investigate whether the territorial context and the type of project's proposing subject are variables affecting the result. The Analytic Hierarchy Process is then as a sensitivity analysis to overcome any overestimates of the outcome. The evaluation shows a social return on investment ranging between 1.10 and 1.70 per euro invested, demonstrating the importance of such practices for all categories of users and all stakeholders involved. Furthermore, it shows some differences in the results deriving from the territorial context (urban, peri-urban, rural), the type of proposing entity (agricultural cooperative, social cooperative, association, and foundations) and the type of disadvantaged category targeted by the project. The proposed evaluation process is found to be adequate for a total understanding of social farming and a correct quantification of its social, environmental, and economic impacts. Finally, the importance of social farming in the achievement of sustainability goals is demonstrated through the comparison between the specific targets of the Sustainable Development Goals and the outcomes and indicators identified during the evaluation process.

In conclusion, the research topic of this thesis, the evaluation of social farming, is of great importance in countries, such as Italy, where social farming is included in various national and regional development plans. The design of a methodological process to quantify the social and environmental impacts (in addition to the economic ones) that social farming produces, can have significant implications for economic and social systems. Social farming plays a crucial role in the achievement of rural development objectives and the creation of regenerative welfare. Its evaluation is of great importance in order to grasp the opportunities that this phenomenon offers at international, national and local levels, and to understand the areas of intervention that can improve the social farming system. Particularly, the creation of practices that focus on the wellbeing of the individual to create aggregate value from multiple components, not just the economic one, is of primary importance, as witnessed by the United Nations 2030 Agenda. The indicators and measurements proposed in this thesis offer new insights into the progress made in the field of social farming evaluation. Besides highlighting the social and environmental impacts produced by social farming, these indicators and measurements offer a guideline in terms of evaluation and monitoring for national and local authorities.

1 - Introduction

This thesis is structured in five chapters. First, it opens in the following pages with an introductory chapter (1) presenting an overview and state of the art on the area of interest of the thesis, the main objective and overall design and organization of the research activities. Second, the thesis contains three published/submitted papers (2, 3, 4), representing some application of the methodologies outlined, being the key section of this thesis. Finally, the concluding chapter (5), in which the overall results of the thesis are discussed and some implications and perspective on the welfare of the agricultural sector are outlined.

This introduction consists of five sections: background on social farming (1.1), thesis objectives (1.2), overall methodological approaches (1.3) data collection procedures (1.4), and the experimental design of the thesis (1.5).

1.1 Background

1.1.1 Social farming conceptualization

Starting from the concept of multifunctionality, according to which the agricultural sector extends beyond the “traditional” function of producing goods made for the market, Social Farming is defined as a local development practice that is socially, environmentally, and economically sustainable and offers services aimed at pursuing the well-being of the populations (National Forum on Social Farming, 2012). In 1999, with the publication of Agenda 2000, the multifunctionality of agriculture was recognised at European level, thus laying the foundations for the development of a new vision of agriculture.

In Italian legislation, the law of 18 August 2015, no. 141, “Provisions on social farming” in article 1, formalised, at least at the Italian level, the definition of Social Farming as “an aspect of the multifunctionality of agricultural enterprises aimed at the development of interventions and social, socio-health, educational, and socio-occupational insertion services, in order to facilitate adequate and uniform access to essential services to be guaranteed to individuals, families, and local communities throughout the national territory and in particular in rural or disadvantaged areas”.

Within this concept of Social Farming, the aim of farms, social cooperatives, and other Third Sector organisations is to produce social activities using agricultural resources, in a multifunctional process. These practices are generally carried out in cooperation with the socio-health services and the assigned public authorities in play and must be aimed at generating inclusive benefits, such as the social and job placement of disadvantaged and marginalised categories, and favouring therapeutic, rehabilitative and care paths, thus increasing social cohesion.

1.1.2 The evolution of Social Farming

Social farming represents an element of continuity in the Italian agricultural and rural tradition. Different perspectives can be found in the literature explaining the emergence of Social Farming. A first one attributes to Social Farming all those practices of care individuals with physical and mental disorders through agricultural practices. The American psychiatrist Benjamin Rush was among the first, in the 19th century, to claim that carrying out manual activity in contact with the nature helped the healing of subjects suffering from mental and psychological disorders, who were otherwise usually left to their fate, locked up, and chained in some hospital (Rush, 1812). Other studies in the literature, discordant with this view, show how, only since the 2000s, the term “social farming” has been used with the intention of defining a series of initiatives aimed at offering services to the population in rural areas, with particular reference to those activities of social and labour inclusion (Giarè et al., 2018). Currently, it is possible to state that Social Farming is defined, therefore, as a multifunctional practice of agriculture that generates social benefits, such as socio-occupational inclusion, through agricultural practices. The most recent studies lead to the definition of some common traits for Social Farming interventions, which delimit their characteristics (Giarè et al., 2018) and which can be summarised in the following points:

- Agricultural activities are carried out for productive and social purposes for the benefit of fragile individuals (people with physical or mental disabilities, psychiatric disorders, alcohol or drug addicts, prisoners or ex-prisoners, etc.) or are aimed at segments of

the population (children, the elderly) for whom there is a lack of services (Di Iacovo, 2020);

- These practices are characterised by the re-appropriation, through farming practices, of land, often destined to be abandoned or otherwise under-utilised, and located in rural and peri-urban areas, or owned by associations that do not use them for productive purposes, or, finally, of land confiscated from criminal organizations and to be re-allocated.
- From this perspective, therefore, Social Farming, through a more "correct" use of the land resource, makes an important contribution to redefining the relationship between agriculture and society in a positive sense, leading to an increase in the reputation of farms (Di Iacovo et al., 2016).
- All the actions implemented consist in the collaboration between entities with different purposes, operating in different sectors (area plans, health facilities, farms), have a local dimension, and respond to specific needs, but contextually bring together their expertise to achieve a common goal.

In all European countries, Social Farming is well established in local systems and targets a wide range of people, including those with physical and mental disabilities, those with addictions, former prisoners, the long-term unemployed and, more generally, all those disadvantaged categories with strong social exclusion.

1.1.3 Social Farming in Europe and Italy

In Europe, recent years have seen a growing interest in, and debate about, the social and economic implications of the Social Farming practices. At the European level there is no legal framework regulating Social Farming activities, and this makes it difficult to recognise these activities, partly precluding their dissemination and development on a wider scale. According to the European Economic and Social Committee (EESC), "It is...necessary to have a definition of social farming at European level in order to establish which activities fall within the sector and to define a framework and a set of criteria, including quality criteria, whose fulfilment

guarantees that an initiative is eligible for support under the various EU policies", and 'The absence of a regulatory framework for social farming, both at European level and in individual countries, means that the policies and/or institutions concerned do not act in a coordinated manner. The EESC frames that EU authorities and institutions, both regional and national, should encourage and support social farming by adopting an appropriate and favourable regulatory framework' (EESC, 2013). Because of its strong potential, social farming is emphasised by the EESC, which believes that ad hoc actions are needed to encourage and incentivise its development, both at European and at national and regional level. Therefore, in its concluding part, the EESC suggests greater involvement of civil society and broader cooperation between the various policy fields and the various administrations responsible at European, national, regional, and local level. The document also mentions the need to start a research programme in order to obtain quantitative data, to encourage interdisciplinary research to validate empirical results, and to pay special attention to training activities for all stakeholders.

A comparative study (Dell'Olio et al., 2017) of social farms conducted in different European countries shows that there are three guidelines regulating the different experiences. In Italy, France, and Spain, the primary objectives are the integration at work and social inclusion. In the Netherlands, Belgium, and Norway, farms (care farms, in this case) are enterprises set up by different family-owned farm who join together to produce agricultural goods and, at the same time, offer reception services, thus realising a model of multifunctionality. Finally, in other countries (Germany, Slovenia, Austria, Poland and Ireland), social farms, born as experiences led by the third sector, currently operate in close collaboration with the health services and, generally, focus their interventions on a single type of service user, such as people with mental disorders and/or cognitive disabilities (Dell'Olio et al., 2017).

In Italy, until a few years ago, there was no specific law for Social Farming, which, however, was always indirectly regulated by the guiding laws for agriculture that provided the framework within which to place it. With the Legislative Decree of 18 May, 2001 ("Orientation and modernisation of the agricultural sector, pursuant to Article 7 of Law no. 57 of 5 March 2001"),

better known as the first agricultural orientation and modernisation law, the legislation opened up new scenarios that produced a broadening of the concept of agricultural activities. Recognition as such also of all those experiences that are subsidiary and collateral to actual agricultural activities, establishes the role and concept of the 'multifunctionality' of agriculture. A further contribution to clarifying the institutional landscape in which Social Farming operates comes from some programming acts: the National Strategic Plan (NSP) of 2007-2013 and the “Guadagnare Salute” programme of 2007. The 2007-2013 NSP, adopted on the initiative of the Ministry of Agricultural Policies, and approved by the European Commission on 12 January 2007, contains the priorities and specific objectives of rural development for the four pillars foreseen by EU regulations: competitiveness; environment; quality of life and diversification; leader approach. Within it, there is a clear reference to Social Farming in the third pillar, intended as a tool for improving the attractiveness of territories and for the diversification of the agricultural economy. However, it was only in 2015, thanks to the Law of 18 August 2015 - 'Provisions on Social Farming' -, approved by the Chamber of Deputies and the Senate of the Republic and published in the Official Gazette on 8 September 2015, that Social Farming was recognised as having social and economic importance at national level. Article 2 entitled “Definitions” firstly provides a definition of social farming:

"For the purposes of this law, social farming means the activities carried out by agricultural entrepreneurs referred to in Article 2135 of the Civil Code, in individual or associated form, and by social cooperatives referred to in Law No. 381 of 8 November 1991, within the limits set by paragraph 4 of this article, aimed at achieving:

- social and labour insertion of disabled and disadvantaged workers [...]
- social services and activities and services for local communities [...];
- performances and services that accompany and support medical, psychological and rehabilitative therapies aimed at improving the health conditions and the social, emotional and cognitive functions of the subjects concerned also through the help of farmed animals and the cultivation of plants

- projects aimed at environmental and food education, and the preservation of biodiversity [...]."

A survey carried out by the Research Centre for Agricultural Policies and Bioeconomy (CREA) in 2020 (Borsotto et al., 2023), within the framework of the National Rural Network, made it possible to quantify the phenomenon of social farming in Italy with respect to various criteria. It further provides with indications on the characteristics of Social Farming experiences on the Italian national context. The outcome was also analysed on the basis of the rurality of the national territory (Urban-Peri urban-Rural), the geographical districts (north, centre, south), the characteristics of the farm, services and beneficiaries of Social Farming initiatives (Giarè et al., 2020). The survey showed, first of all, that the most commonly used legal definition among the entities that participated in the survey is that of social cooperatives. Social cooperatives account for 46% of the total number of actors involved; they are followed by individually run businesses (19%) and third sector organisations (12%); less important numerically are public bodies and other forms of cooperation (6% and 5% respectively) (Figure 1.1).

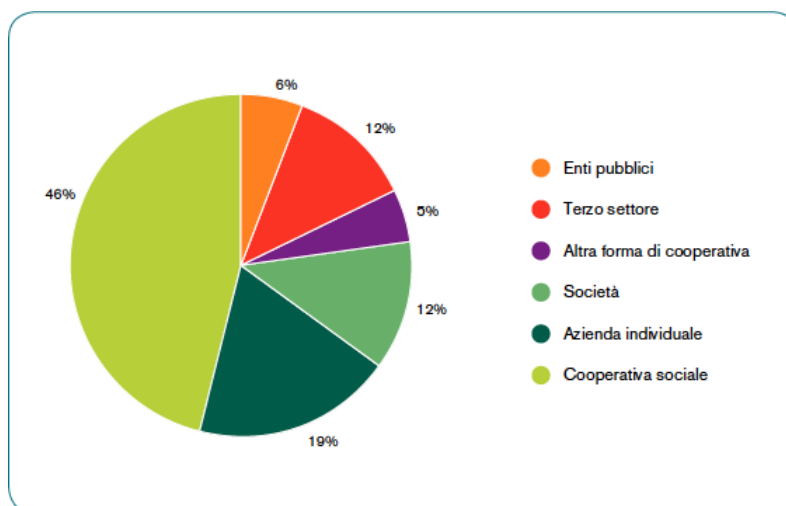


Figure 1.1 Distribution of reality by legal definitions (%). (From Giarè et al., 2020)

Among social cooperatives, type B cooperatives are the most present, while public authorities include, in addition to municipalities and regions, prisons, universities and research institutes, the local action groups (GAL) and care services. The third sector is represented by voluntary, associations religious or not, non-profit associations, and sports associations.

It was also highlighted that the practice of Social Farming is more developed in the Urban/Peri-urban area (60% of the total) than in the Rural area (40% of the total). Furthermore, it has been seen that in Italy there are geographical differences in the distribution between Urban-Peri-urban and Rural areas of businesses that develop Social Farming: in Central Italy Social Farming is more concentrated in Urban or Peri-urban areas, while the North has larger rural areas on average (Figure 1.2).

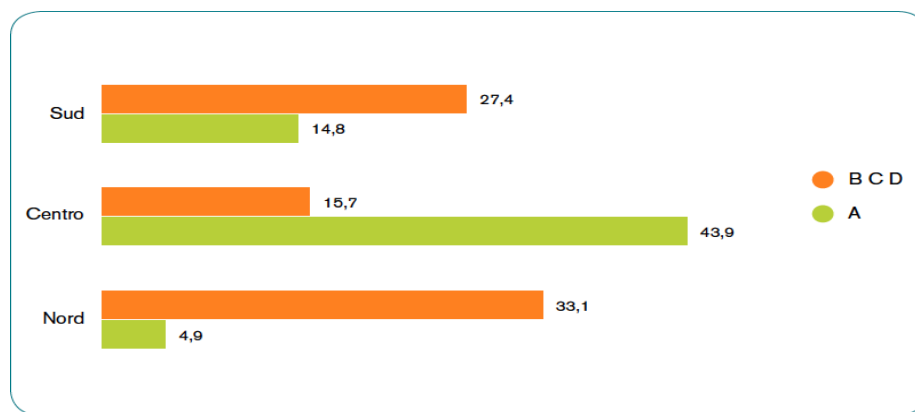


Figure 1.2 - Average farm surface involved in Social Farming by area (%). A= Urban areas Urban; B = Rural areas with intensive agriculture; C = Intermediate rural areas; D = Rural areas with development problems. (From Giarè et al. 2020)

An analysis of the production activities involved in SF revealed a greater presence of annual crops in all areas, followed by greenhouses and poly annual crops.

Almost 70 per cent of the Social Farming operators surveyed implement socio-labour insertion paths, as defined by Article 2 of Law 141/2015, with a prevalence of about 2 percentage points in rural areas (Figure 1.3).

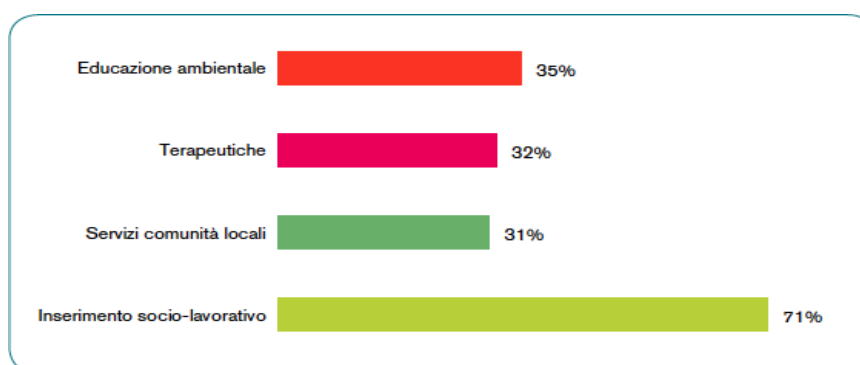


Figure 1.3 - Activities performed (%). (From Giarè et al. 2020)

Among the activities related to agriculture, the two most present, particularly in rural areas, are farm shops and educational farms linked to environmental education projects; these activities can both be supported by Rural Development Programmes as aspects of farm multifunctionality.

The types of services offered are reflected in the ways of involvement of the recipients of the AS activities: the apprenticeship modality is more widespread in the Urban/Peri-urban areas, while in the Rural areas it is the work bursary that has a more relevant weight. The mission of social cooperation in creating employment opportunities for disadvantaged people is witnessed by the fact that in Italy, during 2013, social cooperatives offered regular employment opportunities (thus excluding forms of employment such as internships and work bursaries) to more than 30,000 disadvantaged individuals, despite the current crisis (Borzaga et al., 2019). The level of education of agricultural workers engaged in Social Farming is medium to high: about 51% have specific skills and 58% have a university degree.

These data (Borsotto et al., 2023) only concern farms as defined by Regulation (EU) 2018/1091 (art. 2 paragraph a), but - as is well known - social farming can also be carried out by social cooperatives that have a turnover deriving from agricultural activities of at least 30% of the total, as provided by L. 141/2015. The same law and the subsequent implementing decree give the regions the task of drawing up a list. The recognition procedures are, however, partially different among the various regions, both in terms of criteria and procedures (Giarè et al. 2020) and sometimes refer to regional norms drafted before the national one (currently not

yet fully completed, given the lack of the Guidelines that should give indications on the criteria for recognition), effectively widening the range of recognised subjects.

To make up for this lack of data (Borsotto et al., 2023), the latest ISTAT 2020 Census intervened, which presents data on the diversification of agricultural enterprises, also specifying the type of activity carried out. The total number of farms that include social farming within their multifunctional process is only 1.4% of the total (Borsotto et al., 2023).

1.1.4 Social Farming in national and international development plans

Social farming is increasingly present in policy documents - not only agricultural - and in debates promoted by practitioners and scholars (Borsotto et al., 2023).

Indeed, social farming has become an increasingly relevant component in national and international policies due to its potential in addressing crucial challenges such as sustainable rural development, social inclusion (Dell'Olio et al., 2017; Di Iacovo, 2020; García-Llorente et al., 2016; Genova et al., 2020), health and welfare promotion, environmental conservation and community cohesion (Borgi et al., 2019; D'Angelo et al., 2022; Di Iacovo et al., 2016; Genova et al., 2020; Mion et al., 2022; Moretti, 2020). The growing attention towards social farming testifies to the value that over the years this set of practices has demonstrated both in terms of benefits for the people involved and in terms of improving the services offered at the local level (Giarè et al, 2018).

Numerous studies have demonstrated the potential of social farming in promoting:

- sustainable rural development (Garcia-Llorente, 2016) through job creation, income generation and local welfare (Di Iacovo et al., 2017; Genova, 2020; Giarè et al., 2018) and the improvement of food security, thus reducing poverty and promoting the resilience of rural communities;
- social inclusion through socio-occupational inclusion projects that have a strong impact on improving the quality of life and self-determination of participants, thus contributing to the reduction of social isolation and socio-economic inequalities;

- health and well-being, according to the One Health approach, through access to healthy food produced by social farming contributing to the improvement of the population's health (Borgi et al, 2018), reducing the risk of food-related diseases;
- environmental conservation through the use of sustainable practices that can contribute to the preservation of biodiversity, soil conservation and reduction of environmental impact;
- community cohesion (García-Llorente et al., 2016) through social interaction between different groups of individuals thus contributing to strengthening the social fabric of the community.

Because of the characteristics listed above, social farming plays a fundamental role in achieving the goals set by the new international and national policies. In fact, it is evident how social farming is absolutely in line with the sustainability goals (SDGs) foreseen by the 2030 Agenda, at least as far as SDGs 1 "no poverty", 3 "good-health and well-being", 8 "decent work and economy growth", 10 "reduce inequality" and 12 "responsible consumption and production" are concerned. In addition, it plays an important role with regard to the rural development goals envisaged in the second pillar of the 2023-2027 CAP. In fact, the strategic line and concrete actions implemented by the CAP provide for sustainable management of natural resources, a vigilant attention to avoid all those practices that may contribute to increasing climate change, and an innovative thrust to promote practices that keep alive a rural economy that promotes employment in the agricultural sector, in the agro-food industries and in the associated sectors, thus creating a virtuous path in the environmental, social and economic spheres.

1.1.5 The evaluation of social farming

Although the importance of the social farming practices is well established in the literature, as shown in the previous section, there is still a lack of suitable tools for evaluating and monitoring these practices (Giarè & Macrì, 2012). The absence or limited number of studies on the evaluation of social farming causes a lack of data (Basset, 2023) and information inherent to

the outcomes of the experiences, and the impact (Spataru et al., 2020) they have on the users (Pretty, 2018), local communities, the actors implementing them and the environment. Furthermore, without an efficient methodology that can quantify the social and environmental benefits derived from AS, it is difficult to understand the extent to which it can contribute to the achievement of sustainability and rural development goals.

The importance of the evaluation of SF is also given by the policy implications that its results can produce. Indeed, evaluation results can be used to inform policy and funding decisions concerning social farming. Positive impact evidence can support the need for continued investment or expansion of existing programmes, while identified areas for improvement can guide towards adjustments in policies and implementation strategies (Herrera Sabillón et al., 2022). Furthermore, evaluation can play an important role in sharing good practices (Shortall, 2022) by identifying and sharing best social farming practices in order to disseminate the most efficient approach. Finally, the results of evaluations can reveal areas of intervention (Smith et al., 2022) that need to be improved in order to have a better outcome and make the whole process more efficient.

In some countries, such as Italy, the importance of a social farming evaluation process is also provided by the social farming law. In fact, among the tasks foreseen for the national social farming observatory is that of dealing with the evaluation and monitoring (Moruzzo et al., 2019) of social farming projects. Unfortunately, to date, for various reasons, no evaluations of social farming projects have been produced by the observatory (Giarè et al., 2020; Senni & Pavoncello, 2022).

From this brief overview, there is a need for an evaluation methodology that can ensure that initiatives in the agricultural sector are effective, sustainable and able to meet the needs of communities and the surrounding environment (Elsen & Fazzi, 2021).

A number of scholars (C. Leck, s.d.; D. C. Leck, 2015; Tulla et al., 2020) have proposed the Social Return on Investment methodology for quantifying the social and environmental benefits of social farming. Although the methodology was found to be suitable for the identification and quantification of social and environmental impacts, it left some areas still unexplored or subject

to limitations, such as the subjectivity of the analyser in the estimates made for the quantification of some impacts. Furthermore, some limitations of the methodology have emerged that do not allow for an efficient application of the method to the phenomenon under study.

1.1.6 Evaluating from a Civil Economy perspective

In this thesis work, the Civil Economy was used as key concept to approach the evaluation of social farming.

The Civil Economy (Zamagni & Zamagni, 2010) represents an innovative and alternative approach to traditional economic dynamics, moving towards values of sustainability, social equity and environmental responsibility. It takes its first steps thanks to the Italian economist Angelo Genovesi (Zamagni & Zamagni, 2010) according to whom (Genovesi, 1769) the economy was to be considered as a moral and social science, promoting the idea that the economy should serve the common good and the well-being of society.

This model is based on three fundamental principles (Bonomi and Giorgetti, 2023): the centrality of the individual and his or her relations with society and the environment; a vision of the market as a place of mutual benefit, where it is possible and necessary to generate value for all stakeholders; and finally, the consideration of society as a whole as capable of self-organising in order to preserve and promote the common good and shared goods through responsible behaviour (Zamagni et al.,.).

In fact, according to the Civil Economy paradigm, it is the responsibility of the whole society to promote the welfare of its members by linking its three spheres: the public sector, businesses and the third sector, i.e. civil society organisations (Becchetti & Cermelli, 2018). Furthermore, resources from the corporate world must be directed towards the common good, social services and environmental protection. Safeguarding common interests is essential to maintain a democratic social order (Zamagni et al.,).

Based on these conceptual premises, the concept of evaluation in civil economy (Zamagni et al.,) differs from that of other economic systems. For civil economics, in fact, the purpose of

evaluation is to value, and not judge, the impacts produced by a certain activity or organisation. The impact (Bonomi and Giorgetti, 2023) is the sustainable change in the long term, whether positive or negative, direct or indirect, on people or environmental conditions, caused even in part by the organisation's intervention (Zamagni, 2015). Therefore, organisations must define the change they wish to achieve, include social and environmental dimensions within their market practices, act responsibly and co-create value for the community together with their stakeholders.

1.1.7 Civil Economy and Social Farming

In the literature in recent years, a number of studies (Fonte & Cucco, 2017; Polidori & Pavoncello, 2021) have demonstrated the connections between the principles of the civil economy and the objectives of social farming.

Undoubtedly, one of the main aspects that the civil economy and social farming have in common is that of placing the individual's self-determination at the centre of the process, through socio-occupational inclusion, for the improvement of his or her well-being. Furthermore, networks and relationships between the various stakeholders involved in the process is another key aspect. Networks must be based on mutual respect and trust for the proper implementation of projects. In this way, in line with the principles of civil economy, social farming promotes local development through links between members of society, creating resilient communities (FAO Report, 2022).

The pursuit of long-term social and environmental sustainability (Garcia-Llorente, 2016) is certainly another element that accumulates the civil economy paradigm with social farming practices. Lastly, the educational character of social farming, through apprenticeships. In fact, it has been shown (Leck, 2015; Tulla et al., 2020) that social farming has a strong role in increasing the specific skills of users, as well as educating them in civic and environmental issues.

For these main reasons, it was decided in this thesis work to evaluate the phenomenon of social farming under the lens of the Civil Economy.

1.2 Objectives of the thesis

Within the context outlined in the previous sections, this thesis aims to achieve four main objectives related to the evaluation of the social farming phenomenon.

The first objective is to provide an evaluation method that can be efficient for the study and quantification of the social, environmental and economic impacts of social farming on all categories of users, thus contributing to provide new applications to social farming, which are scarce in the literature. To do this, the intermediate objective was to provide an overview of the methodologies used in the literature to quantify the impacts of social farming.

The second objective is to test the adaptability of the proposed method using the unprecedented integration of different qualitative-quantitative evaluation methodologies, through a comparison and synthesis of results, in order to overcome the specific limitations of specific evaluation methods.

As a third objective, it was decided to investigate the contribution that social farming can bring to the achievement of sustainability, rural development and welfare creation objectives through a comparison between the social and environmental indicators identified in the impact assessments and the specific targets of the SDGs.

Finally, the aim was to emphasize the social and environmental impacts produced by social farming through their monetary quantification. This helps to provide information and support welfare, health, and social policymakers in their actions.

1.3 Methods

Several methods were used within this thesis in order to comprehensively and efficiently evaluate the social farming practices.

Firstly, the Social Return on Investment (SROI) was used (chapters 2 and 4) in order to quantify the social and economic benefits deriving from social farming projects; secondly (chapter 4) the SROI method was flanked by three other methodologies, such as SWOT analysis, in order to assess the socio-territorial context within which the projects being evaluated were implemented; the Business Model Canvas, in order to assess the business model of the different project leader to understand whether this could be a variable affecting the final outcome; and the Analytic Hierarchy Process as a sensitivity analysis for the SROI, and to observe the different weights that the different actors assign to the outcomes identified in the SROI analysis.

Furthermore, the PRISMA method was used (Chapter 3) to carry out a systematic literature analysis to investigate which methods were used to evaluate social farming in the literature and what the limitations of these methods were when applied to the phenomenon under study.

1.3.1 SWOT ANALYSIS

SWOT analysis is a technique developed more than 60 years ago to support the development of business strategies in contexts with a high level of uncertainty and competition. Over the years, the application of SWOT analysis has been extended firstly to development scenarios and public intervention decisions, and secondly to the evaluation of regional programmes. The objective of the SWOT analysis is to identify the growth potential of a geographical region, sector or area of interest resulting from the enhancement of strengths (Strengths) and the management of weaknesses (Weaknesses), internal to the context of analysis, in the light of the framework of opportunities (Opportunities) and risks (Threats) arising from the external context.

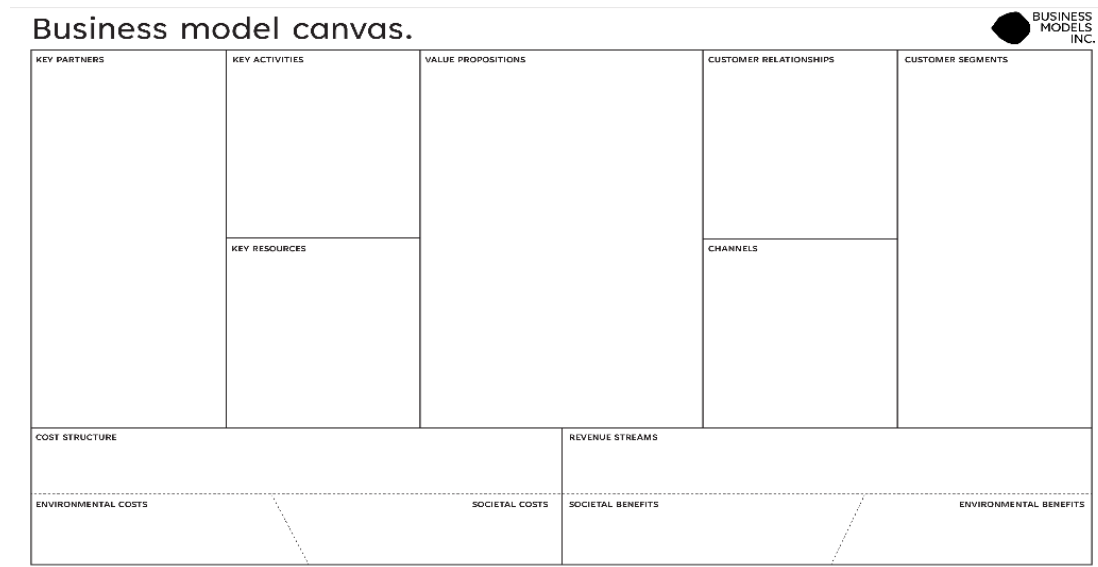
SWOT analysis can be carried out either at the desk, i.e. directly by the researcher who will identify by himself the strengths, weaknesses, opportunities, and threats of a given plan or organisation, or with a participatory approach through stakeholder engagement techniques. Moreover, it can be carried out ex ante to improve the integration of the project in its context, in the intermediate phase to verify that the project is following its course and possibly make changes to improve it, and ex post to contextualise the final results of the project. In each case, the SWOT analysis consists of six phases:

- Step 1: Recognition of the territorial context in which the project is implemented or in which the organisation operates, and identification of possible trends and problems;
- Step 2: planning of possible actions to be taken to overcome the problems; identified in the previous phase;
- Step 3: analysis of the external context and identification of threats and opportunities in the sector in which the organisation operates or in which the project is delivered;
- Step 4: analysis of the internal context, with identification of internal factors (strengths and weaknesses) that can facilitate the development and overcoming of obstacles;
- Step 5: construction of the SWOT matrix (Figure 1), consisting of four areas in which strengths, weaknesses, opportunities and threats will be identified;
- Step 6: identification of actions that, by exploiting strengths and opportunities and reducing weaknesses and threats, can facilitate the organisation or project implementation in reducing development problems.

The main advantage of SWOT analysis is that it allows the identification of the main strategic lines in relation to an overall economic or sectoral development objective. Moreover, if participated in, it can produce development plans with the consensus of all stakeholders. The disadvantages lie mainly in the subjectivity of the analyst that can cause distortions in the analysis, and in the description of reality that can sometimes be simplistic. This can cause difficulties in applying this methodology to complex systems, such as social farming, which generate numerous direct and indirect social benefits.

1.3.2 BUSINESS MODEL CANVAS (BMC)

The Business Model Canvas (BMC) is a methodological tool to define how a company creates value for its customers, delivers its product and captures part of the value of the product for its own profit or benefit. The BMC produces a summary document that describes a company's business model based on 9 blocks of characteristics:



Customer Segments: Identifies the different groups of people or organisations that the company intends to address and serve.

Value Propositions: Describes the products or services offered by the company and how they meet the needs or solve the problems of customers.

Channels (Channels): Indicates how the company reaches and provides value to its customers. These channels may include online sales, physical distribution, communication channels, etc.

Customer Relationships: Specifies the type of relationships the company establishes with its customers, which may be personal, automated or community-based, for example.

Revenue Streams: Indicates the sources of the company's revenue, i.e. how the company earns money through the sale of products or services.

Key Resources: Identifies the critical assets needed to make the business model work, such as financial, human, physical and intellectual resources.

Key Activities: Describes the fundamental actions that the company must perform to make its business model work.

Key Partnerships: Indicates strategic alliances or collaborations with other companies or entities that are critical to the success of the organisation.

Cost Structure: Represents all costs associated with the operation of the business model, including fixed and variable costs.

The purpose of this methodology is to provide a simultaneous overview that increases the understanding of the resources, activities, products and value of a company's business and marketing channels, but also to evaluate social farming as a strategic economic objective for the proposing entities that participate in it (Pölling et al., 2017).

1.3.3 Social Return on Investment (SROI)

The Social Return on Investment (SROI) is a method that aims to quantify a broader 'value' than that expressed in economic or financial terms alone; in fact, through the use of outcomes, indicators and financial proxies to measure social and environmental benefits, it allows the social and environmental components to be expressed in monetary terms (Nicholls et al., 2012). By incorporating these benefits into the analysis, this approach aims to enhance both the reduction of social inequalities and environmental degradation and the improvement in the state of well-being of individuals resulting from a certain investment.

There are two types of SROI analysis:

1. *Evaluative*, conducted ex-post and based on actual outcomes achieved. It is particularly suitable for the evaluation of completed projects and programmes.
2. *Predictive*, aimed at forecasting the social value that will be created if activities achieve the expected outcomes.

This analysis methodology involves 6 steps for its proper implementation:

1. **Define the field of analysis and identify stakeholders.** Through the identification and involvement of stakeholders, this approach makes it possible to understand on which, and to

what extent, the generated value falls. In this way, value can be broken down according to each stakeholder's perception of the extent of change (outcome);

2. **Outcome mapping.** Through stakeholder engagement, outcomes are identified, which represent the measure of change for each stakeholder as a result of the output produced by the investment;

3. **Quantifying the outcomes and assigning a value.** Each identified outcome is to be associated with an indicator that, through the use of financial proxies, will make it possible to measure the outcomes in monetary terms;

4. **Define the impact.** A number of measures are applied to the value found through the quantification of outcomes in such a way as to reduce the risk of overestimating outcomes as far as possible. The first of these measures is the deadweight, which reflects the amount of outcome that would have occurred even if the analysed activity had not taken place and is calculated by subtracting from the total value of the outcome a percentage corresponding to the estimated amount of outcome that would have occurred anyway. The second measure is the drop-off, a measure that reflects the duration of the effect of the outcome and is calculated by subtracting a fixed percentage (10%) for those outcomes that have a duration of more than one year and for which a reduction in the total value is estimated as time passes.

5. **Calculate the SROI.** Calculate the financial value of the investment and calculate the financial value of the social costs and benefits;

6. **Return, utilise, integrate.** Draw up a report to inform stakeholders of the results obtained, but also to put the results to the test.

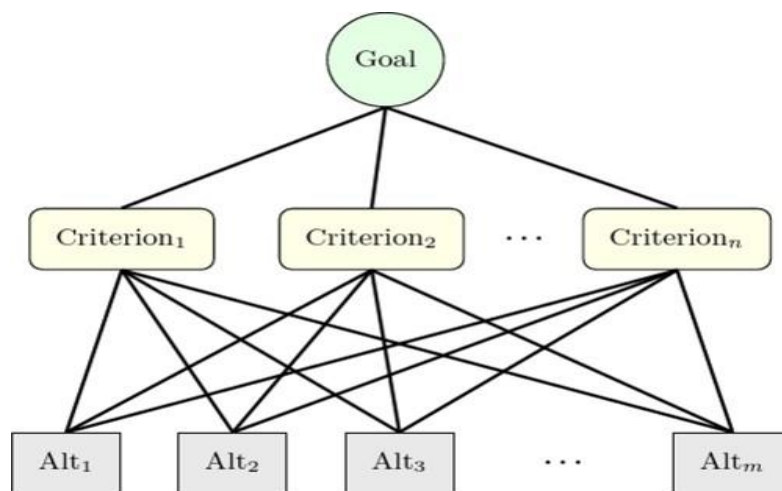
The main innovation of the SROI lies in the development of calculation tools (proxies) for the quantification in monetary terms of the outcomes in relation to stakeholders in the economic, social and environmental spheres. In addition, through the calculation of the SROI it is possible to understand to what extent each stakeholder has contributed to the value generated and what areas need to be improved.

It should be emphasised, however, that the monetisation of impact may, in some cases, place more emphasis on economic measurement than on its valorisation. A correct and clear

preamble on the objectives of the analysis could help to overcome this risk, as could the accompaniment of other impact methodologies that more efficiently value the value generated.

1.3.4 Analytic Hierarchy Process

The Analytic hierarchy process (AHP) is a multi-criteria analysis methodology developed in the 1970s by the naturalised Iraqi-American mathematician Thomas L. Saaty that has since found wide application in various fields as it is suitable for use in any problem solving situation involving an evaluation and measurement process. AHP allows the decision-maker to model a complex problem in a hierarchical structure that shows the relationships between the objective set (goal), the criteria used to make the decision, any sub-criteria and the alternatives that are the subject of the decision-making process itself.



Through a detailed structural decomposition of the problem, the decision maker can easily identify the fundamental components of the problem and understand the logic of their interdependencies. The flexibility of the AHP derives from its ability to handle the rational and intuitive aspects of decision-making, allowing the selection of the best alternatives based on a respectful evaluation of a wide range of criteria.

AHP is based on two widely used approaches to organising knowledge and understanding decision-making problems: the deductive approach, which analyses individual components and then interprets the problem as a whole, and the inductive approach, which considers the

system as a whole without delving into the function of each individual element (Saaty, 2001).

AHP integrates both approaches for understanding complex problems.

The flexibility of AHP has made its application possible in numerous areas, including selection, evaluation, resource allocation, benchmarking, quality management, public policy, health care and strategic planning (Saaty, 2008). The final evaluation and the weights assigned to problem elements are based on pairwise comparisons made by the user between evaluation criteria and available options.

It envisages five steps for its correct and efficient implementation:

1. **Identification of criteria:** Initially, the criteria or factors that influence the results of the model or system are identified. These criteria may be either quantitative or qualitative and may represent different aspects of the problem under consideration.
2. **Structuring the hierarchy:** Using AHP, a hierarchy of the identified criteria is structured, organising them into hierarchical levels that reflect their dependency and importance relationship. For example, one can have high-level criteria (as general objectives) and low-level criteria (as specific indicators).
3. **Preference evaluation:** The relative preferences or weightings of criteria are evaluated using pairwise comparisons. This process involves assessing the relative importance of each criterion in relation to the other criteria in the same hierarchy.
4. **Calculation of weights:** Using the pairwise comparison matrices generated during the preference evaluation process, the relative weights of the different criteria are calculated. These weights reflect the relative importance of the criteria in the specific context of the analysis.
5. **Integration into the sensitivity analysis:** Once the weights of the criteria have been obtained, they can be used in the sensitivity analysis to assign a relative weight to variations in the parameters associated with each criterion. This makes it possible to consider not only the variations in the parameters, but also the relative importance of the criteria that these parameters influence.

Integrating AHP into sensitivity analysis thus allows for more informed decision-making by considering not only parameter variations, but also the relative priorities of the criteria involved in the decision-making process. This approach can improve understanding of system dynamics and guide towards more robust, data-supported decisions.

1.4 Data collection

In the applications of the methodology proposed in this thesis work to the phenomenon of social farming (chapters 2 and 4), data collection to carry out impact assessments was carried out by means of the data collection technique of direct interviews through focus groups. This methodology was chosen for two main reasons: there was a desire to have direct contact with the interviewees, but also because, in general, it is a methodology that allows for the free expression of the subject, and limits the interviewer's discretionary capacity (Corbetta, 2014). Furthermore, the proposed methodologies for evaluation from a civil economy perspective required a high degree of stakeholder involvement, which is why the choice of focus groups seemed the most suitable.

A total of 106 users belonging to different disadvantaged categories (persons with physical or mental special needs, ex-prisoners, persons suffering from addiction, migrants or persons at risk of social exclusion) were interviewed in the different impact assessments. With regard to the lead partners, 7 lead partners were interviewed who differed from each other in terms of subject type. Thus, we will have as lead partners: type B co-operatives, associations or social co-operatives.

Stakeholder	N. interviews
Users	106
Leader subject	7
Tutors	21
Farms	25

Finally, the company tutors who support the users throughout the project period, and the farms that hosted them during the training period were interviewed.

Given the strong differentiation between the types of disadvantaged categories in the study, it was decided not to include family members in the analysis, in order to ensure a standardisation of the impacts identified for all the categories of actors in the study. In spite of this, the strong

impact of social farming on the family members of the users, especially on the category of individuals with physical and mental special needs, must be emphasized.

1.5 Outline

During the three years of my PhD course, I was able to deepen my knowledge, in particular, on the topics of the multifunctionality of agriculture, with special reference to social farming, and impact assessment. I have dedicated this thesis to the study of social farming evaluation, applying some impact evaluation methodologies, as described in detail in the previous sections. In the context of the introduction provided so far in this chapter, this section is dedicated to presenting the outline of the thesis.

Chapter 2 “The sustainability of social farming: a study through the Social Return on Investment” provides a first application of the Social Return on Investment to the social farming phenomenon. In this chapter, the social and environmental benefits of social farming projects for people affected by addiction are quantified for the first time. In fact, the few studies in the literature on the evaluation of social farming focus more on the categories of people with special needs and much less on the other disadvantaged groups. Moreover, in Italy, there was no experience in quantifying the social and environmental benefits of social farming projects in general. Thanks to this work, published in the journal “Italian Review of Agricultural Economics (REA)”, the limitations of the methodology emerged, and are thus further investigated and addressed in the following chapters.

Chapter 3 “The evaluation of social farming through the social return on investment: a systematic literature review” aims to provide an unprecedented overview of the applications of Social Return on Investment to the social farming practices, through a systematic literature review. In this way, an attempt was made to provide an initial response to the limitations highlighted in the previous study. For example, identifying outcomes and financial proxies to estimate the monetary value of certain social and environmental benefits, through a comparison of results. The need for further applications of the methodology to the phenomenon under study emerged from this work, in order to enable a standardisation of the methodology. Furthermore, the possibility of integrating different quali-quantitative methods for an efficient evaluation of social farming emerged.

Chapter 4 “A new integrated framework to assess the impact of social farming on sustainability and rural development. A case study in Lazio” used a unprecedented integrated approach involving four quali-quantitative methods (SWOT, Business Model Canvas, SROI and AHP) to assess the social farming practices in all its complexity and attempt to overcome the specific limits of the specific methodologies. This approach allowed the study of the evaluation of social farming: SWOT and BMC methods made it possible to observe the differences present in the various projects that have an effect on the result of the impact assessment; the SROI made it possible to quantify social and environmental impacts on a par with economic impacts, allowing a comparison between them; the AHP made it possible to overcome certain specific limitations of the SROI. This allowed to investigate some characteristics that had not been investigated in previous studies in the literature.

The projects analysed have a positive social return ranging from around €1.10 to €1.70 per euro invested. The importance of expressing this value in monetary terms lies in the implications in terms of welfare and agricultural policies, which often follow the 'affordability' of a project, as opposed to its impacts.

Finally, Chapter 5 “Discussion and Conclusions” jointly discusses the results of the aforementioned chapters, the limitations, and implications of the results.

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2 - The sustainability of social farming: a study through the Social Return on Investment

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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.

2.1 Introduction

Social farming 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 farming 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 n° 141/15 regulates the functioning of SF, describes its activities and subjects and defining 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 law refers the law n° 381/91 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 have had a remarkable growth in the last few years in Italy, showing a diversification of actors, experiences and recipients (Giarè et al., 2018), even if:

- there is a relevant presence of social cooperatives and, in lesser extent, farms; other typology of actors are less common;
- the activities concern all the typologies defined by art. 2 of Law 141/2015 , 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.

- To analyze 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 associates a monetary value to every social and environmental benefit, with respect to the project "I frutti della buona terra" of the "Agricoltura Capodarco" Cooperative.

In this work is presented first of all a review of the literature available on SF. Then we will briefly present the case study, i.e. the farms, specific project analyzed 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.

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 analyze 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;

2.2 Literature review for social impact assessment

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. In particular, some studies focus 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 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 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 and 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.

2.3 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. (LR n° 7/18).

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 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 farms selected.

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.

2.4 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 and Campbell, 2011). Given the interest in analyzing 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 user considered, on the stakeholder 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 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 No. 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 users includes 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 analyses was done manually and was 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".

2.5 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 100343.33€ 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.

Stakeholder	Input	Outcome	Indicatore	Possibile proxy	Valore economico
Utenti		Miglioramento qualità della vita	Accesso a borsa lavoro	Salario derivante da borse lavoro	$400\text{€} \cdot \text{mese} \cdot \text{utente} = 68000\text{€}$
		Maggiore probabilità di trovare lavoro	Contratto post borsa lavoro	Salario derivante da contratto post borsa	$800\text{€} \cdot \text{mese} \cdot 0,059 \text{ut}$ ente $450\text{€} \cdot \text{mese} \cdot 0,059 \text{ut}$ ente $= 10588,2\text{€}$
		Riduzione isolamento sociale	Numero sedute recupero psicologico	Minori costi sociali recupero psicologico	$15\text{€} \cdot \text{mese} \cdot \text{utente} = 1650\text{€}$
Cooperativa Capodarco		Aumento valore sociale azienda	Numero inserimenti socio-lavorativi	Risparmio nei costi di tutoraggio	$67,76\text{€} \cdot \text{mese} \cdot \text{utente} = 677,6\text{€}$
Aziende agricole		Diminuzione costi di produzione	Tirocini attraverso borse lavoro	Risparmio su costo del lavoro	$400\text{€} \cdot \text{mese} \cdot \text{utente} = 68000\text{€}$
		Aumento reputazione	Aumento vendite	Maggiori ricavi	$0,05 \cdot \text{costo lavoro utente} = 3400\text{€}$
Ser.D.		Riduzione della probabilità di ricaduta per i pazienti	Numero di visite dal medico	Costo visite mediche	$40 \cdot 4 = 160 \cdot \text{utente} = 2720$
			Riduzione utilizzo medicinali	Costo medicinali	Da 0*giorno*utente = 0€ A $0,9\text{€} \cdot \text{giorno} \cdot \text{utente} = 4590\text{€}$

			Riduzione numero ricoveri	Costo ricoveri per malattie infettive	1024x0,054=55,30 euro
Ambiente		Maggiore incidenza agricoltura biologica	Più attenta gestione delle risorse naturali e minore uso di input chimici	Diminuzione rischi ambientali	1€*mese*utente = 20€ 1099€*ettaro*anno = 4396€
			Minor emissione di CO ₂	Diminuzione emissioni di CO ₂	Valore economico non stimato per dimensione e tipologia aziende
		Espansione pratiche di Agricoltura Sociale	Riduzione terreni abbandonati	Migliore controllo idro- geologico e minore rischio incendi	Valore economico non stimato per dimensione e tipologia aziende
Comune Velletri	Finanziamento progetto nei 3 anni = 100343,33 €	Riduzione probabilità che questa categoria commetta reati ed entri nel sistema carcerario	Minori costi detentivi	Costo di un detenuto per il sistema carcerario locale	0,0128*utente*costo giornaliero*anno=98 31,5€
		Riduzione acquisto	Minor ricorso alle sostanze stupefacenti	Costo stupefacente	68€*giorno/settimana*utente =272272€-38896€

		sostanza stupefacente			
		Creazione di lavoratori attivi	Maggiori immissioni di denaro nell'economia locale	Percentuale del salario speso nella comunità locale	$0,8 \cdot 400\text{€} \cdot \text{mese} \cdot \text{ute}$ nte = 54400

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 was 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 subject, having lived 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 better mentally 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 socio-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 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 interview 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 savings 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 xenobiotics 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 xenobiotics 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 15715€ 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 (Table 2).

According to 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 80238.2€, resulting from an economic benefit of 68000, corresponding to the value of wages earned (Table 1), and a social benefit of 12238.2€ 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 1355.2€ composed solely of the economic dimension, as it corresponds to the value deriving 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 7365.3€ and 103127.5€ 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 33170, 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 (€100343,33), corresponding to the value of the initial investment by the Municipality of Velletri, from the total outcome (€290706,92), is therefore €190363,59, 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.

2.6 Conclusion and discussion

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 environmental 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 socialfarming, 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.

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3- The evaluation of social farming through the social return on investment: a systematic literature review

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Abstract

In recent years, there has been a need for a shared methodology for evaluating social farming (SF) practices to verify not only their effectiveness but also their social and economic sustainability. The evaluation of SF has been highlighted using the methodology of the social return on investment (SROI) due to the potential of such approach regarding the quantification of social impact. The main purpose of this study is to provide an overview, through a systematic review, of the application of SROI to SF experiences to check the results comparability, both in terms of outcomes standardization and comparisons between SROI ratios. The results first show some similarities on the construction of outcomes that allow for the initial comparability of the results. Secondly, all the indicators calculated in the articles report a social return value of social farming projects that varies approximately from EUR 2 to EUR 3 per euro invested. Critical issues remain regarding the application of this methodology to SF practices, regarding the number of the applications of SROI to SF, the process of stakeholder engagement and the construction of outcome. There is a need for more studies that apply SROI to SF experiences in order to standardize the process of analysis.

3.1 Introduction

Social farming is a branch of multifunctionality agriculture that produces numerous social, environmental and cultural benefits [1]. The purpose of this practice is to provide social, social-health, educational and re-employment services (Law 141/2015) for individuals from disadvantaged categories (Law 381/91). Social inclusiveness, gender equality and responsible production, commonly in conjunction with sustainable farming [2,3], biological agriculture and re-use of abandoned farmlands [4] with the One Health approach [3] are distinctive characteristics of social farming. In this context, the objectives of social farming practices are fully in line with the 2030 sustainable developmental goals [5,6], particularly SDGs 5, 8, 10 and 12 [7], aiming at the creation of added social and environmental values in the entire production system. In particular, the aforementioned characteristic of social farming directly to the achievement of the targets 8.5 “by 2030, achieve full and productive employment and decent

work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value”, 8.6 “by 2020, substantially reduce the proportion of youth not in employment, education or training”, 10.2 “by 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status”, 10.3 “ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard”.

Interest in the multifunctional role of agriculture and its associated social and environmental benefits with it is steadily increasing [8-10], even though the number of subjects and institutional actors operational in social farming, particularly in relation to welfare [11], continue to remain limited [12]. In fact, social farming also contributes to the identification of new welfare scenarios by promoting innovative paths of co-design and co-implementation of services, through the active involvement of multiple actors [13]. Indeed, the need to innovate the current system by focusing on a renewed collaboration between the public and private sectors, the creation of networks that involve even new actors and the identification of shared solutions to complex problems has been expressed from many fields [14]. Nevertheless, although many experiences (including that of social farming) extensively demonstrate the soundness of such approach, policies seem to be evolving extremely slowly, being bound to logics of cost containment rather than improved outcomes. Studies highlighting the “cost-effectiveness” of some innovative approaches, of the effects on individuals, businesses, and the environment, can, therefore, be extremely useful in decision support.

The importance of evaluating these practices does not lie on the simple measurement of monetary value—closely linked to the capitalist worldview [15]—but on the necessity to raise the value of both social and environmental overall impacts that these phenomena generate with a methodological approach using the same currency of the economic revenues. This methodological approach has been recently developed in social sciences with the social return on investment (SROI) as a quantitative assessment tool [16,17]. SROI has also been already used [18-20] for evaluating the social return of multifunctional agriculture even though its

application on social farming has not been made yet the subject of a comprehensive analysis, which would evaluate its actual effectiveness, replicability and level of standardization in its implementation and results, limiting its replicability and standardization in this specific field of interest. However, the applications of SROI of social farming has not been made the subject of a comprehensive view in its implementation and results, limiting its replicability and standardization.

The objective of this systematic review is to provide an overview of a specific methodology for the evaluation of social farming [4,18,20]: the SROI. This methodology has been chosen because it is the only model, among those used in social farming, capable of giving the quantitative proxies of the impacts, including monetary terms. There is a strong debate in the literature [21,22] about the potential of this method in the economic quantification of social benefits, in the construction of the outcomes [23] and in the financial proxies used to calculate the SROI. For these reasons, the main purpose here is to increase the knowledge of the application of SROI to the phenomenon of social farming to check the comparability in the results, both in terms of outcomes standardization and comparisons between SROI ratios.

3.2 Theoretical background

Cost-benefit analysis is the most used approach to estimate the strengths and weaknesses of economic activities. However, some critical issues have been raised on the effectiveness of cost-benefit analysis in identifying and measuring hard-to-monetize benefits, such as social benefits [24-27] .

Several authors [28,29] have highlighted the need to identify a more complex evaluation methodology for social impact/benefits, and different methodological approaches have been proposed to identify and evaluate the social impact generated by economic activities [15,28,30-33], even though they are primarily centered on qualitative rather than quantitative monetary assessment [11].

Theory of change [33], which is an analytical tool used to identify and evaluate the entire history of change from the moment it begins to occur to the moment it ends, was proposed to evaluate

social impact. Social impact assessment [31] is a method used to identify the direct and indirect social impacts, but also to evaluate development projects in agricultural disputes [30]. Moreover, some authors have been using SWOT analysis [32] and social enterprise impact evaluation [15] to assess the impact generated by social cooperatives. These studies highlight the importance of identifying and evaluating the social impacts generated by the multifunctional agriculture practices deployed by social enterprises [15], but they focus less on quantifying the social benefits of social farming. Finally, SROI has been used in several studies [16,17,34-36] to quantify social benefits in monetary terms, especially in the mental health field.

Social farming has been evaluated extensively from a qualitative perspective [4,37-41] but less from the quantitative angle. Most of the studies focus on describing social farming experiences and their effects on specific disadvantaged groups, with little attention, if any, on the quantification and the economic measurement of the effects/benefits produced.

In this context, the quantification of the social benefits of social farming has been highlighted in recent years by studies using SROI as a methodology [21,22,42], which has been developed and widely used internationally to evaluate projects and organizations in the field of public health [16]. The ability of this methodology [22] to quantify social impact makes it possible to extend this approach to different fields, such as social farming. In recent years, in fact, this approach has also found applications in social farming projects [18-20,42,43].

SROI [44] is a methodology that aims to quantify a broader concept of “value” than that expressed in economic or financial terms alone. Using outcomes, indicators and financial proxies to measure social and environmental benefits, allows the social and environmental components to be expressed in monetary terms. This approach, integrated with cost-benefit analysis, is able to value the reduction in social inequalities, environmental degradation and the improvement in the well-being of individuals resulting from a given investment.

There are two types of SROI analysis [44]:

1. Evaluative, conducted ex-post and based on actual outcomes achieved;
2. Predictive, aimed at predicting the social value that will be created if activities achieve the expected outcomes.

This methodology of analysis involves six steps for its successful implementation:

1. Defining the scope of analysis and identifying the stakeholders;
2. Mapping the outcomes;
3. Quantifying outcomes and assigning a value;
4. Defining the impact;
5. Calculating the SROI;
6. Returning, using, integrating.

The main feature of the SROI relates to the evaluation process used to measure social and environmental benefits (impacts), based on a few characterizing points:

- (a) A comprehensive identification, and subsequent involvement, of stakeholders (direct and indirect) that are affected by the implementation of social farming projects;
- (b) The creation of an impact map that identifies the effects (outcomes) that projects generate on identified stakeholders;
- (c) The development of calculation tools (proxies) for quantifying, in monetary terms, these effects, which, in relation to the stakeholders, invest in the economic, social and environmental spheres.

3.3 Materials and methods

The PRISMA approach was used [45] to describe the results obtained in this systematic review on the use of SROI to evaluate projects in social farming. The review choice relies on this method, as a systematic review characterized by transparent paper selection process reduces the effects of researcher bias and improves the rigor and completeness of the analysis [46].

Initially, a keyword search was conducted on “Scopus”. The search terms initially used were “Social Return on Investment” or “SROI” and “Social farming” or “Social Farming” or “Green Care”. Later the search was expanded by the terms “evaluation” and “social impacts”; however, most of the papers mined with this approach dealt with “green care” and other topics that were not in the scope of this study.

Therefore, the search fields were limited to the more focused terms “SROI” or “Social Return on Investment” combined with “social farming” or “social farming”. Moreover, the same search was performed on Google Scholar to identify papers potentially dealing with social farming. After an initial analysis of the papers found, a search was finally conducted by author, and the bibliography of each paper was analyzed to ensure that every study on the applicability of SROI to social farming was included.

For both the literature sources identified through Scopus and those identified on Google Scholar, a time order from 1996 to 2022 was included. This time frame was chosen because the first recorded SROI report was published in 1996 [16].

The analysis of the papers was conducted manually, first through an analysis of the abstracts and then by reading the full text of the articles. The eligibility of articles for the study was determined by defining inclusion and exclusion criteria.

Articles that provided both a theoretical framework on the applicability of SROI to social farming projects and an application of SROI through a case study were considered. On the other hand, articles that addressed the topic of social farming evaluation from a qualitative perspective, or through other methodologies and/or applied SROI to other fields of agricultural multifunctionality were excluded. Finally, those articles for which the full text could not be accessed were also excluded.

The evaluation of selected articles was performed by scoring specific quality assessments. Specifically, a score from 1 to 3 was assigned for the following criteria:

1. Quality of analysis includes transparency about the rationale for using the SROI and its application;
2. Transparency in the construction and quantification of outcomes;
3. Sample size: how representative the study is of the overall phenomenon;
4. Reflection on the results: in particular, whether a discussion of the strengths and limitations of this methodology was assessed.

For criteria assigned a value of 1 point, a rating of “low quality” was given. For a score of 2, the rating was “medium quality”. Finally, for those criteria assigned a value of 3 points, the items were rated “high quality”.

Descriptive analyses were first carried out on the selected articles. In particular, the year of publication, the country in which the article was written, the presence or absence of case studies within the articles, and the types of service users studied were analyzed.

Next, the issues of particular interest in achieving the set goals were analyzed. Then, where possible, the degree of stakeholder involvement and the types of stakeholders included in the analysis, the outcomes that were constructed for the SROI analysis, the SROI ratio obtained, the time horizon of the analysis, and the applicability of the SROI for social farming evaluation were analyzed. The last issue was analyzed by summarizing the strengths and weaknesses of SROI expressed in the identified articles.

The results obtained were used to map the applications of SROI to social farming.

3.4 Result

3.4.1 Research strategy

An initial analysis of article abstracts identified 57 scholarly articles on the application of SROI to the social farming phenomenon. Then, based on the eligibility criteria listed above, the sample was reduced to 10 articles. The remaining 47 articles were excluded from the study because after a thorough reading of the full texts, they were found not to be relevant to the object of study of this systematic review. In addition, one final paper was eliminated because the case study was a duplicate of an article already in the analysis. Of the nine selected articles, 45% came from the Scopus database, while the remaining 55% came from articles identified through the Google Scholar search engine. Of the latter, 95% were scholarly articles, while 5% were doctoral dissertations (Figure 1).

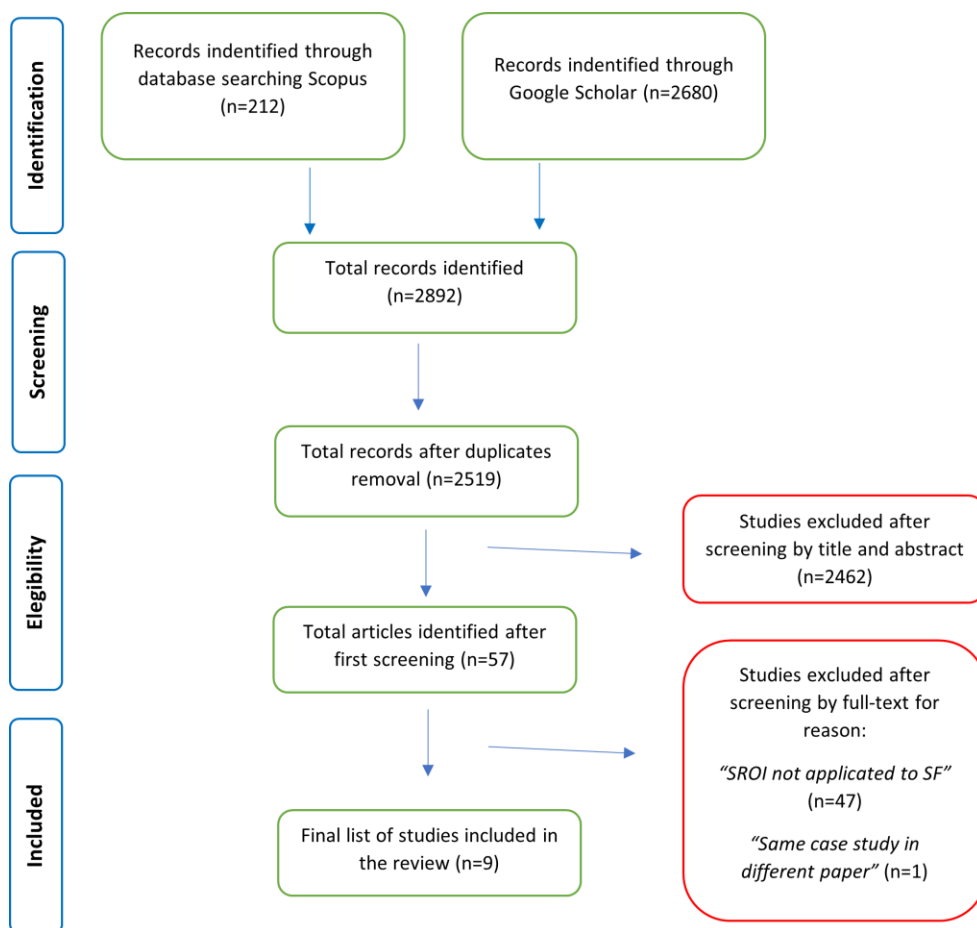


Figure 1. The PRISMA approach.

After the process of identifying and admitting articles, the articles were evaluated through quality assessments (Figure 2). The quality assessments were chosen and quantified according to the research objective of this systematic review.

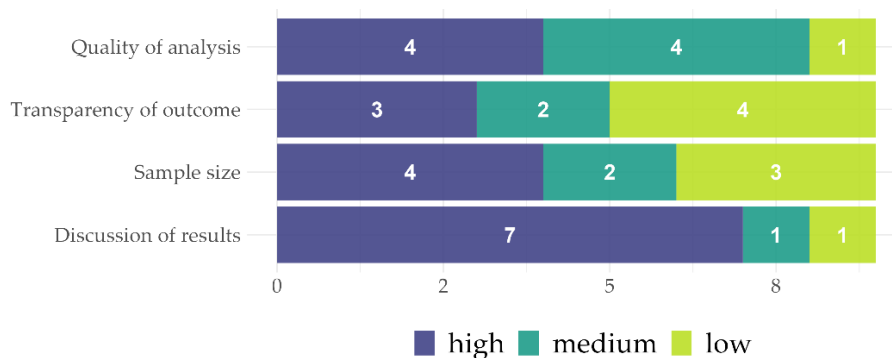


Figure 2. Quality assessment.

Regarding the criterion “Quality of Analysis”, 45% of the articles comprehensively show the analysis design, the reasons why and how the SROI was applied. Therefore, these articles are

found to have a “high” value, 45% a “medium” value, and the remaining 10% a low value. The articles evaluated according to the criterion “Transparency of outcomes” are 30% high-quality articles, as they have the description of the outcome map within them. The remaining 70% consisted of 23% medium-quality articles and 47% low-quality articles. Concerning the “Sample size” criterion, 45% of the articles were rated “high” in value, as the analysis sample was representative of the phenomenon under consideration, 33% were medium in value and the remaining 22% were low in value. Finally, the articles evaluated according to the criterion “reflection on the results” are 78% high-quality articles, as they presented in discussion the limitations and critical issues of this method. The remaining 22% are medium- and low-quality articles.

The descriptive analyses carried out on the selected articles regarded the year of publication, the geographical area of the studies, and the research methodology for applying SROI to the evaluation of social farming (case study or theoretical framework).

Regarding the year of publication, it can be observed (Figure 3) how the time range of publications is from 2013 to 2021. It can also be seen how the articles are distributed linearly. There is, in fact, no strong predominance of one year over another.

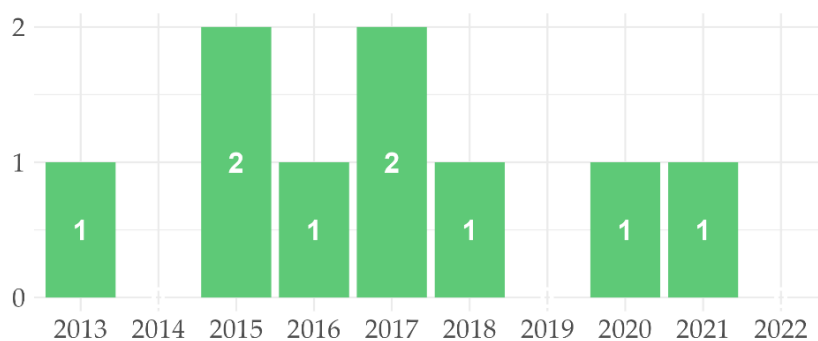


Figure 3. Year of publication.

Regarding the geographical distribution in which the studies were conducted, as shown in Figure 4, there is a predominance of studies in Spain (three studies). The remaining studies were conducted in the United Kingdom (two), Italy (one), Germany (one), Ireland (one) and Mexico (one). The predominance of studies in Spain can be explained not only by the

characteristics of the area in which the phenomenon was analysed but also by a large group of researchers interested in these issues.

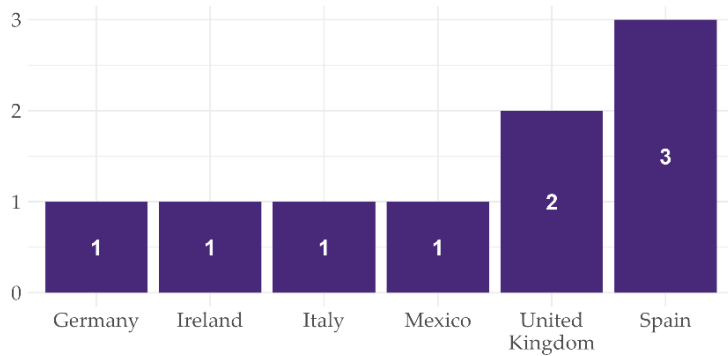


Figure 4. Distribution of studies.

Finally, Figure 5 shows the research methodology used. Almost all studies present an application of SROI to a specific case study (77 percent). The remaining 23% consisted of two studies that provided a theoretical framework on the potential and limitations of using SROI to evaluate social farming.

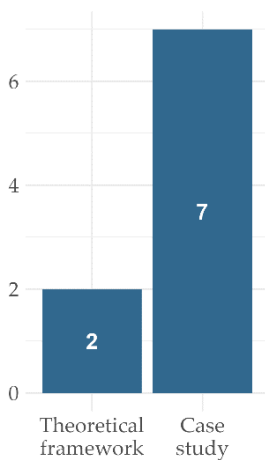


Figure 5. Research methodology.

3.4.2 Research theme

As a first point, we wanted to analyse, in the articles that provided an application of the SROI, which stakeholders were involved in the analysis and the relevance of the effects generated by the social farming on the different categories of stakeholders.

All studies analysed have identified the following categories of stakeholders, i.e., the service users of the projects, the social farms or farms hosting the internship services, the local institutions and the community in which the projects were embedded.

Moreover, different categories of service users were considered in the studies identified and analysed (Figure 6), i.e., people with disabilities, people at risk of social exclusion and people affected by addiction. This last category represented only 10% of the sample, with a predominance of the studies targeting people with disabilities and/or people at risk of social exclusion (90 percent).

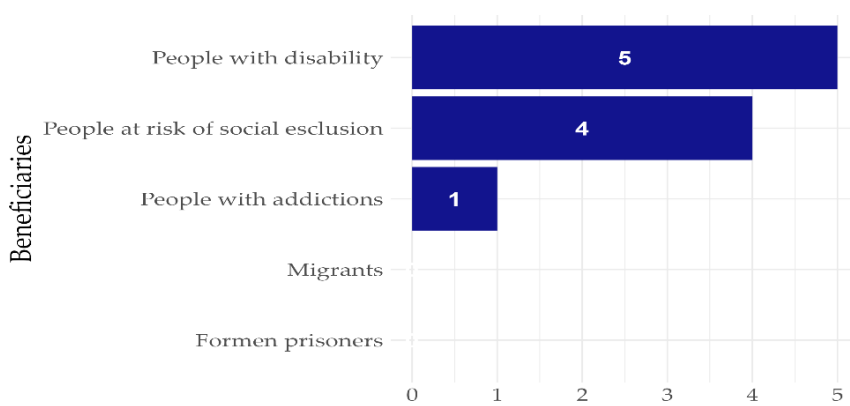


Figure 6. The service users of social farming projects.

Depending on the various purposes of the project, different entities related to specific services (addiction recovery centres, social recovery centres, group homes and associations) were included among the stakeholders.

In addition, 71% of the studies included the service users' family members as stakeholders in their analysis since many studies [4,19,20,43] have emphasized that, especially in cases of projects targeting individuals with disabilities, there are important spillovers to their family members as well. A few studies also included volunteers in the stakeholder-mapping [19,20,43] and one [18] included as a stakeholder the environment since it has already been considered as a subject with a legal personality [47].

One of the most debated aspects on the use of SROI for social farming evaluation is the construction of outcomes [22,23]. For this reason, one of the main topics of this paper is to compare the outcomes constructed in the different articles analysed, towards a standardization

in the construction of outcomes at least for those stakeholders common to all studies. It has been possible only for the three studies [18,20,43], out of the nine selected, which presented a clear description of the construction procedure of financial outcomes and proxies through an impact map. Another two studies [4,48] presented the effects on stakeholders in the form of outcomes, but they did not present the procedure used for their quantification.

In the three studies where the outcomes and impacts map were analysed, the outcomes and proxies were constructed through interviews or sources in the literature.

By analysing the outcomes (Table 1) for different stakeholders, the study shows that for the category of users, the identified outcomes are “improved quality of life”, “acquisition of job skills”, and “reduced social isolation” in all studies. Additionally, additional outcomes such as “increased independence” are considered in some studies. There is also similarity in the construction of proxies for quantifying outcomes; for “acquisition of job skills” and “reduced social isolation”, the proxies “remuneration from post-project contracts” and “lower cost for psychological sessions” are used.

	Outcomes	Proxy	Basset e Giarè, 2021	Leck, 2013	Tulla et al., 2020
Beneficiaries					
	improve quality of life	salary received for work performance	X	X	X
	acquired new skills	salary of new job after the project	X	X	X
	Improved mental health/reduce social isolation	fewer visits for psychological recovery	X	X	X
	improved social relationship	People who participate in social activities		X	X
Cooperatives					
	development of cooperatives	saving in tutoring/cost	X		X
Host Farms					
	increase of marketplace value	increase sales	X	X	
Health Service					
	lower hospital/caregiver costs	daily cost of hospitalization	X	X	X
Families					
	less time spent on care	lower cost for family therapy		X	X
Community					
	decrease in unemployment rate for disabled people	lower cost of unemployment benefits		X	X
	lower cost of social security	daily cost for prisoners	X		
		value of social security payments			X
Enviroment					
	Improvement of the biodiversity of the territory around the project	Less dispersion of ecosystem value for recycling xenobionts	X		
		proxy identified but not measured			X

Table 1. The map of outcomes in common among three studies [18,20,43].

Outcomes for local institutions and local communities depend greatly on the type of stakeholders analysed. In fact, the mapping of outcomes in studies that dealt with different categories of subjects, made it possible to highlight and quantify with a unified methodological approach, different social impacts on different local communities, depending on the category of subjects under study. Therefore, for projects that have people with physical or mental

disabilities as service users, measurable social benefit are observed through decreased costs for physical and psychological recovery and a decrease in the unemployment rate for this category [20,43].

For projects targeting individuals with addiction [18], social gain that can be measured through a decrease in the likelihood of these individuals committing crime (in turn measured through the cost of incarceration expenses).

Regarding health national services, a lower number of hospital admissions can be measured through the daily cost of hospitalization.

Comparisons can also be made for the outcomes constructed for cooperatives and farms. In fact, in the two out of three studies analysed, the main outcome was “Development of the cooperative” measured through the proxy “lower cost of production”. Thus, an increase in revenues and sales due to lower product cost was found. Regarding farms, there is a concern around the increase in marketplace value, which is measured with the proxy “increase sales”.

In studies that included family members of users, the best benefit identified was less time spent on care. In both studies this outcome was measured by the lower cost of family sessions for psychological support.

It was not possible, however, to find similarities in the construction of outcomes for project volunteers. In addition, particular differences were found in the construction of various outcomes, which are mostly to be attributed to differences in the identification of stakeholders or, as mentioned earlier, to differences in the projects analyzed.

Regarding the calculation of the SROI indicator, there is a differentiation among the selected items. A total of 57% apply SROI to a single project, repeated over time by aggregating the costs and benefits of different years into a single indicator. In contrast, 43% of the articles apply the SROI to multiple projects, managed by different social farms. These articles provide both an indicator with the aggregated costs and benefits for each project and the different indicators calculated for each project.

In each case, all the indicators calculated in the articles report a social return value of social farming projects that varies approximately from EUR 2 to EUR 3 per euro invested.

Time is a factor to be considered in SROI analysis in two different aspects. The first concerns the boundaries of the analysis, i.e., whether it is used to evaluate a project or the performance of a company or institution. In the first case the boundary will be the duration of the project; in the second, a choice must be made about the years to be considered in the analysis [44].

All the papers analysed in this review chose to analyse individual projects, aggregating, as seen, the results for multiple years or multiple social farms. This choice is supported in the literature [16,28] by the potential this methodology has demonstrated in evaluating individual projects.

The second aspect concerns the duration of outcomes, and consequently, the duration of the calculated social return value. This aspect is shown in 43% of the articles. Among them, 67% consider the drop-off (the loss of value over time) to be 0 for all outcomes. For these studies, the longer the duration of the identified outcomes, the greater the effect of that outcome on the stakeholder. In contrast, 37% of the articles calculate drop-off for only three outcomes out of the fifteen measured.

3.5 Discussion of Results

This systematic literature review allowed us to map and to give comprehensive analysis of existing studies on the application of SROI to social farming practices, highlighting the effectiveness of SROI in quantifying social impacts. Indeed, all the studies analysed have shown an economic return, ranging on average from two to three times the investments, characterized by a strong social component. Moreover, the overall view of the phenomenon made it possible to identify what areas still need to be explored and what interventions are needed to further extend and consolidate the implementation and evaluation of social farming experiences.

Identifying articles was the first challenge of this study, as there is no indexed database for the applications of SROI [16].

The fact that the first applications were made in the United Kingdom is no accident. In fact, SROI was designed and developed in the United Kingdom [49], and this finding is consistent with other studies on SROI in other areas [16,50]. The distribution over the years 2013-2021 is also consistent with reviews in the literature on applications of this methodology [16,46,50,51]. Nowadays, the multifunctionality of agriculture is assuming an increasingly important role, especially in view of the new Agenda 2030 goals [6]; [40], and the interest in the role these practices play in creating social value is growing [2,39,52].

Regarding the geographical distribution of studies, as it has been seen, there is a strong predominance of Spain and the United Kingdom. For the United Kingdom this can be explained by what has just been said about the temporal distribution. For Spain on the other hand, the motivation lies in the presence of a growth interest in the social farming topic for rural development plans [2,53,54].

Similarities in the identification of key stakeholders (service users, cooperatives/farms, local institutions and the local community) were observed. In addition, national personal care services are included in all studies. The identification of institutions and health national servicers as key stakeholders confirms the importance of public-private sector collaboration to efficiently implement these types of services.

Different authors did not always include indirect stakeholders, such as the case of users' family members, in the analysis. Certainly, differences in the projects that were evaluated and differences in the territorial areas in which they are implemented also play a role in this context. Analyses on the construction of outcomes showed that, at least on the studies carried out so far, it was possible to make an initial standardization regarding service users, regardless of their category. In addition, it was seen that even for the categories of local institutions and communities, an initial standardization can be obtained. It is necessary, however, to differentiate items by category of service users as different indirect effects on society were observed for different categories of service users. Clearly this also depends on the many differences among the social farming projects evaluated in the articles. The first standardization for key stakeholders is one of the main results of this work, as it allows the

reduction in the analyser bias by estimating the SROI ratio. In fact, the studies analysed show that at least 70% of the result comes from quantifying the outcomes constructed for the key stakeholder categories.

The calculation of the SROI ratio shows how these projects are sustainable in all their dimensions; all studies show more than positive social returns. Comparisons on SROI ratios have shown the economic relevance of social, and to some extent, environmental, returns. In fact, it should be noted that this methodology allowed some studies [18,20] to break down the outcome obtained into the economic, social and environmental components, showing that more than one-third of the social return comes from measuring social outcomes. This, for the authors, is the greatest potential of applying SROI to this context. Indeed, the importance of quantifying social outcomes [15] for the evaluation of social farming should not lie in the classic view of business reporting. Rather, it lies in the possibility of valuing and making observable and comparable, social benefits on a par with economic ones. Only then can they be factors that countries can consider in policy choices. Moreover, in addition to making it possible to break down the result into the economic social and environmental components, SROI makes it possible to distribute those result among all identified stakeholders; the amount of indirect benefits accruing to society was shown, for example. In all studies, the breakdown of SROI ratios showed the same distributions of value generated. This is further evidence of the significance of the social and environmental benefits generated by social farming. The results on the SROI ratio highlight both which aspects of social farming need more intervention from institutions and the importance of the benefits that accrue to indirect stakeholders, such as society and the environment.

The analysis of the drop-off of social farming projects, which showed the absent of any drop-off in all projects considered in this review, emphasizes the importance of giving continuity to social farming experiences, going beyond individual projects in the direction of integrated national programs, enabling a more efficient implementation of these practices.

To this aim, it is surely needed to expand the current knowledge on social farming by increasing and strengthening the case studies and to further improve the methodological standardization,

particularly with regard to the process of identifying stakeholders and their respective outcomes. This review is a first step in this direction; a larger sample of applications of SROI to social farming would allow a deeper evaluation of the methodological standardization already achieved for a few stakeholder categories and an extension of its application to other stakeholder categories, which have not been addressed so far.

3.6 Conclusion

A strong interest has emerged in the literature in the evaluation of social farming. Few studies, however, have proposed quantitative methodologies for this purpose. The SROI methodology has been found to be adequate for the evaluation of social farming projects in the studies in which it has been proposed, but there are still unexplored areas of research within this methodology, such as sensitivity analyses of estimates. Further studies on the applications of SROI to agriculture projects would allow for greater standardization of the processes of identifying stakeholders and constructing outcomes and proxies. All the studies analysed had more than positive SROI ratios, demonstrating the sustainability of these practices.

In conclusion, there is a need for studies that apply impact assessment methodologies to the phenomenon of social farming. The aim is to find a standardized and shared methodology that can enhance social farming as a relevant practice in achieving the sustainability goals of Agenda 2030.

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4 - A new integrated framework to assess the impact of social farming on sustainability and rural development. A case study in Lazio

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4.1 Introduction

Social Farming is defined as a local development practice that is socially, environmentally, and economically sustainable and offers services aimed at pursuing the well-being of the populations (National Forum on Social Farming, 2012), in accordance with social and solidarity principles. This definition arises from the concept of multifunctionality, according to which the agricultural sector extends beyond the “traditional” function of producing goods made for the market. Indeed, social farming has become an increasingly relevant component in national and international policies due to its potential in addressing crucial challenges such as sustainable rural development, social inclusion (García-Llorente et al, 2016; Dell'Olio et al., 2017; Di Iacovo, 2020; Viganò et al. 2020), promotion of health and well-being, environmental conservation and community cohesion (Borgi et al, 2018; Genova, 2018; D'Angelo et al, 2022; Di Iacovo et al., 2017; Moretti, 2020; Mion et al., 2022). The increasing attention towards social farming underscores the value that this set of practices has demonstrated over the years, both in terms of the benefits for participants and in enhancing local-level services (Giarè et al., 2018). Several studies have highlighted the potential of social farming in fostering:

- Sustainable rural development (García-Llorente, 2016) by facilitating job creation, generating income, and enhancing local welfare (Di Iacovo et al., 2017; Genova, 2018; Giarè et al., 2018), as well as improving food security, thereby mitigating poverty and bolstering the resilience of rural communities.
- Social inclusion through socio-occupational inclusion projects, which significantly impact the participants' quality of life and self-determination, thereby combating social isolation and socio-economic disparities.
- Health and well-being, aligning with the One Health approach, by providing access to nutritious food from social farming, thus enhancing population health (Borgi et al., 2018) and reducing the incidence of food-related illnesses.
- Environmental conservation through the adoption of sustainable practices, which contribute to biodiversity conservation, soil protection, and reduced environmental impact.

- Community cohesion (Van Huylenbroeck et al., 2012) through fostering social interactions among diverse groups, thereby strengthening the social fabric of the community.

Given its characteristics, social farming plays a pivotal role in attaining the objectives outlined in new international and national policies. It is evident (Garcia-Lorente et al., 2016; Borgi et al., 2020) that social farming aligns closely with the sustainability targets of the 2030 Agenda, particularly addressing SDGs 1 (No Poverty), 3 (Good Health and Well-being), 8 (Decent Work and Economic Growth), 10 (Reduced Inequality), and 12 (Responsible Consumption and Production). Furthermore, it holds significant importance in achieving rural development objectives outlined in the second pillar of the 2023-2027 CAP. The strategic direction and tangible actions set forth by the CAP facilitate sustainable management of natural resources, vigilance in mitigating practices contributing to climate change, and innovation in promoting a rural economy that fosters employment in agriculture, agro-food industries, and related sectors. This, in turn, sets forth a virtuous path encompassing environmental, social, and economic spheres.

In Italy, the 2007-2013 agricultural policy marked the institutional recognition of social farming as a model for sustainable local development. This recognition paved the way for targeted support in subsequent programming periods. Social inclusion, a key objective of EU2020 and CAP 2014-2023, ranks among the top priorities of the 2014-2020 rural development policy. Analysis by the National Rural Network revealed significant variability in the inclusion of social farming interventions across Italian Rural Development Programmes (RDPs) from 2014 to 2020. Specifically, interventions related to social farming were integrated into various measures, notably Measure 16 'Cooperation' and sub-measure 16.9, which supports diversification of agricultural activities into social endeavours. Additionally, Measure 6 'Farm and Business Development,' particularly sub-measure 6.4, supports investments in non-agricultural activities, fostering business diversification.

While the importance of social farming is well documented in the literature (Lanfranchi et al., 2014; Garcia-Lorente et al., 2016; Guirado et al., 2017; Borgi et al., 2020; Nazzaro et al., 2021),

as highlighted in the previous section, there remains a notable lack of adequate tools for evaluating and monitoring these practices (Giarè & Macri, 2012; Giarè et al., 2020; Zadra et al., 2022). This lack of evaluation studies leads to a lack of data (Giarè & Basset, 2023) and information on the results and impact (Faggian et al., 2020) of these experiences on users (Pretty et al., 2016), local communities, implementers, and the environment. Without an effective methodology to quantify the social and environmental benefits of social farming, understanding its contribution to sustainability and rural development goals remains challenging. Several studies (Leck, 2013; Leck, 2015; Tulla et al., 2020; Basset and Giarè, 2021) have suggested the Social Return on Investment methodology to quantify these benefits. Although this methodology has proven useful for identifying and quantifying social and environmental impacts, some areas remain unexplored or affected by limitations, such as the inherent subjectivity in estimating some impacts. Furthermore, some emerging limitations hinder the effective application of this methodology to the phenomenon under consideration.

4.1.1 Literature Review

In literature (Giarè, 2011; Di Iacovo, 2011; Cirulli et al., 2011, Polidori, 2024), the need to evaluate social farming from a multidimensional point of view has been demonstrated.

In recent decades, the importance of using integrated methods that combine quantitative and qualitative approaches to assess the impact of multidimensional initiatives thoroughly and accurately has been increasingly recognised (Francis, 2001; Huang, 2003; Taima and Fisher, 2013). For example, while quantitative methods such as cost-benefit analysis offer a monetary assessment of impacts, they often overlook qualitative and contextual factors crucial to a full understanding of intervention effects. In contrast, qualitative approaches such as interviews and case studies offer insight into underlying processes and causal mechanisms but may lack statistical rigor and generalizability (Queiros et al., 2017).

Integrated methods aim to overcome the limitations of individual methodologies by exploiting their potential (Dendena e Corsi, 2015). They allow both the collection and analysis of

quantitative data, such as economic or health indicators, and qualitative insights from interviews, focus groups or field observations (Dixon-Woods et al., 2004; Dawadi et al., 2021). Evidence supports the effectiveness of integrated methods, indicating that they produce more comprehensive, in-depth, and practical assessments of the impacts of interventions than one-dimensional approaches (Dendena e Corsi, 2015). However, their implementation comes with challenges, including the complexity of designing and carrying out integrated assessments, as well as the need for extensive human and financial resources to conduct in-depth analyses (Queiros et al., 2017; Dawadi et al., 2021).

4.1.2 The objectives

The objective of this study is to propose a new integrated framework to evaluate the impacts of social farming on sustainability and rural development.

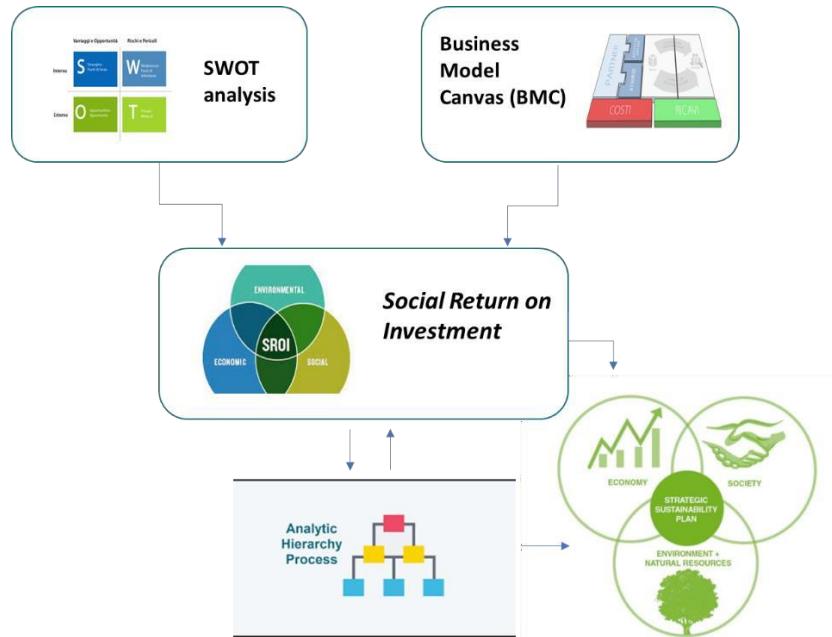
Three sub-objectives were set to achieve this:

- Quantifying the social and environmental impacts of social farming projects on all user categories, creating a comparison of user categories not found in the literature;
- To integrate the results of four methodologies by creating an experimental methodological design to better study the phenomenon under study;
- Compare the indicators used for impact assessments with the specific indicators of the SDGs in order to create a link not found in the literature.

4.2 Methods

Within this work, an integrated methodological approach (figure 1) was used for the evaluation of social farming. It consists of the integration of four qualitative-quantitative methods: SWOT analysis, Business Model Canvas, Social Return on Investment and Analytic Hierarchy Process.

Figure 1: The integrated methodological approach proposed.



4.2.1 The SWOT analysis

SWOT analysis is a technique developed more than 60 years ago to support the development of business strategies in contexts with a high level of uncertainty and competition. Over the years, the application of SWOT analysis was first extended to development scenarios and public intervention decisions, and later to the evaluation of regional programs. The objective of the SWOT analysis is to identify the growth potential of a geographical region, sector or area of interest resulting from the enhancement of strengths (Strengths) and the management of weaknesses (Weaknesses), internal to the context of analysis, in the light of the framework of opportunities (Opportunities) and risks (Threats) arising from the external context. It was decided to use this methodology for several reasons. Firstly, to preliminarily investigate the phenomenon of social farming, trying to understand its characteristics. Secondly, to observe

whether there are any characteristics of specific territorial contexts (socio-economic, demographic, cultural, administrative) that affect the outcome of impact assessments.

4.2.2 The Business Model Canvas

The Business Model Canvas (BMC) is a methodological tool to define how a company creates value for its customers, delivers its product and captures part of the value of the product for its own profit or benefit. The BMC produces a summary document that describes a company's business model based on nine blocks of characteristics. The nine blocks of the BMC consist of customers, value proposition, customer relationships, channels, revenues, key assets, key resources, key alliances and costs.

Through the construction of the BMC we wished to investigate, as a preliminary step, what were the different characteristics of the various proposing subjects deriving from their legal form. In fact, within the projects analysed we will have the presence of different proposing subjects, such as: social cooperatives, associations, foundations. The importance of this analysis is to understand whether the different legal form of the proposing entity can be an important variable within the value generated by social farming projects, and if so, which characteristics most affect the result.

4.2.3 The Social Return on Investment

The Social Return on Investment (SROI) (Nicholls et al., 2015) is a method that aims to quantify a broader 'value' than that expressed in purely economic or financial terms; in fact, using outcomes, indicators and financial proxies to measure social and environmental benefits, it allows the social and environmental components to be expressed in monetary terms. By incorporating these benefits into the analysis, this approach aims to enhance both the reduction of social inequalities and environmental degradation and the improvement in the state of well-being of individuals resulting from a certain investment.

The SROI involves six steps: define the field of analysis and identify the stakeholders, map the outcomes, quantify the outcomes and assign a value, define the impact, calculate the SROI and return, utilize, integrate.

Through strong stakeholder involvement and the identification of appropriate indicators and financial proxies for quantifying outcomes, SROI allows social and environmental impacts to be valued to the same extent as economic ones. This is the main reason why, in this study, it was decided to use this methodology to assess the impact of social farming projects. Furthermore, there are several characteristics (Nicholls, 2015) of the SROI that make it particularly suitable (Banke-Thomas et al., 2018; Tulla et al., 2020) for the study of the social farming phenomenon. First of all, it is a very efficient tool for assessing the impact of a single project with a well-defined duration. It requires direct stakeholder involvement, which especially for the study of phenomena such as social farming, is very important. It is possible to break down the result and thus understand areas of intervention for a more efficient implementation of social farming projects. Finally, allows all impacts to be expressed under the same unit of measurement, the monetary one, which is the same as the one used for welfare and development policies.

4.2.4 L'Analytic Hierarchy Process

The Analytic hierarchy process (AHP) (Saaty, 1987) is a multi-criteria analysis method developed in the 1970s by the naturalized Iraqi-American mathematician Thomas L. Saaty that has since found wide application in various fields as it is suitable for use in any problem solving situation involving an evaluation and measurement process. AHP allows the decision-maker to model a complex problem in a hierarchical structure that shows the relationships between the objective set (goal), the criteria used to make the decision, any sub-criteria and the alternatives that are the subject of the decision-making process itself.

The flexibility of the AHP (Dos Santos et al., 2018) has made its application possible in numerous areas, including selection, evaluation, resource allocation, benchmarking, quality management, public policy, health care and strategic planning (Saaty & Vargas, 2001).

For its successful implementation, AHP involves five steps: identification of criteria, structuring of the hierarchy, evaluation of preferences, calculation of weights and integration into sensitivity analysis.

This methodology was used for two main reasons. Firstly, to investigate whether there are any differences affecting the outcome of the impact evaluation arising from the preferences at the design stage of the different proposing parties. Secondly, as a sensitivity analysis to eliminate, or at least diminish, the presence of bias within the evaluation process.

4.2.5 Data collection

Data collection took place through focus groups and direct interviews with stakeholders. Given the proposed methodological approach, it took place in three stages:

1. a preliminary phase, in which project the leader were interviewed in order to build the SWOT matrix and compile the nine blocks of the BMC;
2. a second phase in which interviews were conducted with all stakeholders of the projects analysed to identify the outcomes produced by the projects on all stakeholder categories and the indicators to be used for their quantification. Where it was not possible to identify the appropriate indicator through the interviews, sources in the literature were used;
3. the third phase, which took place after the impact assessments, in which additional focus groups were set up with project leader for the implementation of the AHP. Due to the different timeframes in which the analyses were conducted, it was not possible to track down the leader of all six projects for which an impact assessment was proposed. Therefore, the four proposers who made themselves available for this further analysis were interviewed.

In total, the following stakeholders were interviewed during this evaluation process (Tabel 1):

Tabel 1: The interview

Stakeholder	Number of interviews
Users	82
Leader entity	6
Tutors	22
Farms	17

It should be noted that a number of users per project of 25 was planned at the planning stage, but that not all projects managed to reach this number for various reasons. Therefore, the total number of users differed between the individual projects. Furthermore, the timing of the projects was also not the same and this caused, in some cases, difficulties in reaching all stakeholders for the interviews. In particular, the following interviews were carried out within this work in order to collect data:

Project	users						Tutors	Leader Entity	Farms
	physical / mental disability	migrants	ex - prisoners	women victims of violence	socio - economic hardship	NEET			
Innesta	23	2					6	2	5
Custodi di Comunità	10					3	4	1	2
Rete Verde	6	8					4	1	4
AS Castel di Guido	11						2	1	0
Orto	9			3			3	1	1
Terra&Libertà	1	3			3		3	1	6

Considering the great heterogeneity of the projects, especially with regard to the categories of users they are aimed at, it was decided not to include users' families and local social and health services among the stakeholders, despite the fact that these projects also have a strong impact (Basset and Giarè, 2021; Tulla et al., 2020) on them.

4.3 Case Study

The intervention of the Lazio Region, Italy, called: ““Networks for the development of social farming for the socio-occupational integration of disadvantaged subjects” - Lazio Region ESF OP 2014-2020 - Axis II - Employment - Investment Priority 9 i) Specific Objective 9” was evaluated to achieve the objectives of this study.

The aim of this project was to promote the constitution of territorial networks for the development of social farming for the socio-occupational integration of subjects in disadvantaged conditions within the eight territorial areas of regional social farming, as distributed below:

- **Roma Capitale A - Rete Verde Project:** the project is proposed by the ENGIM foundation and aims to improve the socio-occupational inclusion of individuals with socio-economic disadvantages (mainly migrants or individuals at risk of social exclusion). Within the ATS there are training organisations for the first part of the project (in this case it was the foundation itself that carried out the task of training the users, being a recognised training organisation), and local farms, agricultural cooperatives and agricultural institutes for the internship period. The territory within which the project is implemented is, as foreseen by the call, an urban or peri-urban context, touching several municipalities in the Rome area;
- **Roma Capitale B – Agricoltura Sociale Castel di Guido Project:** the project is proposed by the PeopleTakeCare association and aims to promote the socio-occupational inclusion of individuals with psycho-physical discomfort and migrants. Within the ATS there is the University of Tor Vergata that dealt with the recruitment of users and the cooperative training institute (IFC) that dealt with the training phase. There were no farms that provided the internship service, but the practical part of the project took place at the 'Castel di Guido' farm of the Municipality of Rome;
- **Roma città metropolitana A – Agricoltura Sociale risorsa di comunità Project:** the project is proposed by the social cooperative BeeST in the Mentana area. It is aimed at people belonging to disadvantaged categories as envisaged by the law.

Within the ATS there are training organisations and agricultural cooperatives that were in charge of the training period and the internship period respectively. Due to the timeframe of the project, it was not possible to carry out the evaluation process;

- **Roma città metropolitana B – Custodi di Comunità Project:** the project is proposed by the agricultural social cooperative Agricoltura Capodarco in the Castelli Romani area. Its aim is to foster the social and work integration of people with physical and/or psychic disabilities and NEETs. Being both a training body and an agricultural social cooperative, it is present within the ATS both to carry out the training function of the users and as a host company for the training period. Together with it there are other farms in the area;
- **Province of Frosinone:** the project is proposed by the Diaconia cooperative of Frosinone. It is aimed at persons belonging to disadvantaged categories as provided for by law. It was not possible to reach this project within the proposed analysis;
- **Province of Latina - Orto Project:** the project leader was Fattoria Solidale del Circeo, which acted both as trainer and host company for the internship. Within the ATS another company in the area acted as host company and others that did not. The addressees of the project were individuals with physical and mental disabilities and women victims of violence;
- **Province of Rieti - Terra&Libertà Project:** the project leader was the Folias social cooperative, which acted as a carer for the participants. Within the ATS there were training organisations and local farms that provided training and internship for the users. The project was aimed at people suffering from addiction and in the care of local social and health services, people with disabilities and migrants;
- **Province of Viterbo – INNESTA Project:** the project is proposed by the agricultural social cooperative Alicenova. The target groups are people with physical and mental disabilities and migrants. Within the ATS there are training organisations, local farms and the University of Tuscia.

The choice fell on this project for several aspects. Firstly, the presence of eight different territorial contexts allowed us to investigate which territorial characteristics (socio-economic, geographic, demographic) may affect the result. This is particularly so in a context such as that of Lazio where the provinces differ greatly from one another. In fact, the projects implemented in the Rome metropolitan area are characterised by an urban or peri-urban context, and projects implemented in the other provinces are characterised by mainly rural contexts. Secondly, it should be emphasised that the Lazio region (Borsotto et al., 2023) has left a great deal of programming freedom in the field of social farming to Local Action Groups, which differ greatly depending on the province in which they operate. Finally, evaluating these projects allowed us to observe the impacts they have on different categories of actors such as: migrants, people with physical or mental special needs, ex-convicts, people with addictions and subjects at risk of social exclusion (NEETs or long-term unemployed).

Moreover, since they all belong to the same project, the different projects in the different territorial contexts share certain characteristics that make them comparable due they are financed by the same regional intervention under the European Social Fund. Firstly, all projects must be proposed by an entity, project leader, from the third sector, which will have to set up an ATS with a social cooperative and/or an agricultural operator and an accredited training entity. Secondly, the activities envisage for all projects a first period of training and a second period of internship at local farms. Finally, the project duration is for all projects 12 months, net of extensions required by specific projects.

As mentioned in the description of the projects, of the eight projects envisaged by the call, six were analysed in this work. It was not possible to carry out the impact assessment for the projects of Rome Metropolitan City A and the Province of Frosinone given the not availability to participate in the study.

4.4 Results

This section will describe the results of the individual methods applied, leaving the implications of integrating the four methods into a single evaluation process to the next section.

4.4.1 The SWOT matrix

The SWOT analysis firstly showed how the territorial context is an important component in the implementation of social farming projects. In fact, while it is true that the main strength of social farming is to increase the wellbeing of the users participating in such initiatives, it is equally true that in contexts where there are solid networks between agricultural and social subjects and between public and private subjects, the potential of social farming is expressed to a greater extent. This is the case, for example, of the projects implemented in the Castelli Romani (Metropolitan City of Rome B) and in the province of Viterbo. Moreover, the presence or not of competent local authorities that can implement international and national policies can be both a strength and an opportunity for the entire system and a weakness. This point is particularly important in a region like Lazio (Borsotto et al., 2023), where implementation of social farming intervention within the Rural Development Program is left to Local Action Groups (LAGs). As for the main opportunities that social farming can seize, they are mainly to be found in the new international and national policies that have recognised its importance (Agenda 2030, Farm to Fork, PNRR, CAP 2023-2027). Furthermore, three subjects stated how social farming could be an opportunity to increase sustainable agricultural production through the use of sustainable agricultural practices within projects. Finally, threats are mainly to be found in the crisis of the agricultural sector, which is unable to meet the demand for labour, and the presence of phenomena such as 'caporalato'. These threats are greater (Zadra et al., 2022) in those territorial contexts that are purely rural and somewhat less so in the peri-urban context.

4.4.2 The Business Model Canvas (BMC)

The BMC showed a substantial difference between leader with a strong agricultural component as well as a social component and those with a strong social component. This difference is reflected in two main aspects. The first concerns the ability of the proposing entity to create networks between the agricultural and social sectors on the one hand, and between the public and private sectors on the other. In fact, there has been greater involvement of local farms in

those projects where the proposing entities have a strong agricultural component within them. The second aspect involves the opportunity to conduct a portion of the internship directly within the cooperative. Conversely, associations, foundations, and social cooperatives are deeply rooted in the local community and possess significant potential for providing comprehensive care to users through their close connections with local social and health services. This primary differentiation leads to variations within the BMC blocks across diverse customers, segments, revenues, and costs, stemming from the presence or absence of agricultural production and/or processing. What unites all stakeholders is the value generated, characterized by a significant social component where individuals and their well-being take center stage in the production system.

4.4.3 The Social Return on Investment

Once the stakeholders were identified and involved, as described in section 3.5, the outcome indicators and financial proxies necessary to quantify the impacts produced by individual projects were identified. This, in fact, is the first outcome of the SROI impact assessment (Table 2)

Table 2: Outcomes, Indicators and Financial Proxies identification

Outcome		Index	Proxy and calculation model	Innesta	Custodi di Comunità	Orto	Terra & Libertà	AS Catel di Guido	Rete Verde
Users	Improved quality of life	Salary from work grants	Work exchange contracts*month*user	X	X	X	X	X	X
	Increased likelihood of finding a job	Post-exchange contract salary	Post-exchange contracts *month*0.15user	X	X	X	X	X	X
	Reducing social isolation	Lower psychological recovery costs	number of sessions *month*user	X	X	X	X	X	X
Leader organizations	Increasing company social value	Savings in tutoring costs	hourly cost *month*0.15 user	X	X	X	X	X	X
	Increasing customer segments	Increased sales	0.05*average turnover	X		X			
Tutor	Professional and job growth	Contracts funded by the project	Contract value *month*tutor	X	X	X	X	X	X
Farms	Decreased production costs	Labor cost savings	job exchange *month*user	X	X	X	X		X
	Increased production	Increased revenues	0.5*user labour cost	X	X	X	X		X
Environment	Respect for nature and the environment	Lower environmental risks	10*month*user	X	X	X	X	X	X
	Increased incidence of organic farming	Less loss of ecosystem service	ecosystem value *hectare*year	X	X	X	X	X	X
	Sustainable Mobility	CO2 savings	(Average car emissions*average kilometers*number of users*number of working days) *cost ton CO2	X	X	X		X	
Local Community	Less likely to commit crime	Lower holding cost	Detention cost *offence committed *user			X	X		X
	Decreasing unemployment rate	Lower subsidies	Average subsidy *month*user	X	X	X	X	X	X
	Creating an active population	Wage percentage essential goods	0.8*salary*user	X	X	X	X	X	X

In all the projects analysed, interviews with users in all categories showed that the most significant impacts were improved quality of life, increased likelihood of finding work and reduced social isolation. The following indicators and financial proxies were used to quantify them:

- The increased quality of life comes mainly from the possibility of gainful employment. Therefore, the salary received during the project months was used as an indicator. The value of the work grant, multiplied by the number of project months and the number of users, was used as a proxy;
- The greater probability of finding a job stems firstly from the skills acquired within the project, in both the training and internship phases. Secondly, from the greater self-confidence they acquire due to the working relationships and friendships they develop in the workplace. The indicator used to quantify this impact is the number of post-project

working contracts achieved by users. As this numerical figure was not available at the time of the evaluation, in accordance with the relevant literature (Basset, 2023; Leck., 2015; Tulla et al., 2020), a figure derived from the past experiences of the tutors interviewed was used to quantify this indicator. The proxy used was the average salary of an agricultural contract, multiplied by the probability of the users finding a job after the project (15%);

- The reduction in social isolation stems from the increased self-confidence and friendship relationships they established within the project. The indicator used was the reduced cost of psychological recovery, calculated by multiplying the number of monthly psychological sessions saved by the number of users and the average cost per session.

Regarding the proposing organisations, an increase in the social value of the organisation emerged in all projects. In fact, since the creation of social value is the mission of these organisations, the success of the project leads to an increase in the organisation's value. This outcome was quantified through the construction of an indicator expressing the savings in the cost of tutoring for a successful social-work placement. The proxy used is the hourly labour cost of a tutor multiplied by the number of months and the number of successful placements. For two organisations, an increase in sales resulting from the reputational effect, and the consequent increase in customer segments, was also observed, estimated at 5% of average turnover.

The tutors expressed during the interview a change concerning professional and personal growth because of their participation in the project. As this outcome is closely linked to the project, the indicator used was the amount of the employment contract. The proxy used is the salary from the employment contract multiplied by the number of tutors.

Concerning farms in all but one project (as no farms were involved in it), two outcomes were identified. The first concerns a decrease in production costs due to the presence of a worker not paid by the farm. This outcome was quantified by means of an indicator expressing labour cost savings. The proxy is given by the amount of work grants in the analysed period.

The project's impact on the environment generated three distinct outcomes:

- A greater respect for nature and the environment resulting from the good practices taught during the internship period. This translates into a lower environmental risk, which in accordance with the literature (Abuhelo et al., 2010) has been estimated at €10 per month per user;
- A greater incidence of organic farming, since the farms that benefit from the project for the impacts listed above are farms that are particularly attentive to environmental sustainability and produce organically. This outcome was measured through the indicator (Costanza et al., 1997) that expresses a lower loss of ecosystem service resulting from a lower presence of xenobiotics in soil recycling. The proxy used is calculated through the ecosystem value estimated in the literature (Costanza et al., 1997) multiplied by the number of hectares of the farms.
- The project facilitated greater sustainable mobility, empowering users to regain independence and utilize public transport or organize shared shuttles with fellow participants. This was quantified by calculating the reduction in CO₂ emissions, determined by the cost of a tonne of CO₂ multiplied by the average daily distance traveled by users to attend training sessions, as per literature guidelines (Guereschi, 2015).

The first two outcomes were observed in all evaluated projects. Sustainable mobility was observed in four out of six projects for users who declared this change in their lives.

Regarding the local community, three main outcomes emerged from the interviews with project stakeholders:

- In all projects, the creation of active population resulting from the amount of the purse that users put back into the local economy was observed. As all project participants were long-term unemployed, this outcome was measured with an indicator consisting of the percentage of the salary a user spends on basic necessities. This percentage was estimated, within the proxy used to measure this indicator, to be 80%, given the low wages received by the users;

- A decrease in the unemployment rate which translates into fewer specific subsidies per disadvantaged category. This value was then multiplied by the number of months and by the total number of users;
- For certain types of users then, a lower likelihood of them committing a crime was observed, and therefore a lower detention cost for the community. This indicator was measured through data in the literature (Serpelloni, 2006) on the daily cost of detention for the probability that a user belonging to a certain category might commit a crime.

Once the economic values of all identified outcomes have been calculated, as shown in the impact map, it is necessary to deduct from these values the deadweight, which, as described above, provides the amount of change that could have been expected even without participation in the project under study, and the drop-off, which corresponds to the loss of value over time of those changes lasting longer than one year.

As for the deadweight, 10% of the value was subtracted for the following outcomes:

- Increased income for the farms from the reputational effect, as part of it might not even derive from the AS project in which they participated;
- Professional growth and work experience of the tutors, for the same reason as above.

For users, no deadweight value was estimated. In fact, the interviews emphasized that the changes in their lives while participating in the project were directly related to the project itself, indicating that they would not have occurred otherwise. Drop-off values were calculated to be 0, as it is assumed that the described benefits maintain their value over time, with a longer stay in the work leading to the maximum potential benefits.

Once the measures for adjusting the estimates (deadweight and drop-off) had been applied, it was possible to calculate the economic value of the outcomes for each stakeholder and subsequently to calculate the SROI for each project (Table 3) as follows: $(\text{value of outcomes} - \text{inputs}) / \text{inputs}$.

Table 3: The SROI Index for all projects

Project	Economic Benefits	Social Benefits	Environmental Benefits	Total	Index
Innesta	333.450 €	156.720 €	455.527,84 €	945.698 €	1,44
Custodi di Comunità	203.876,25 €	72.744 €	172.089,77 €	448.710 €	1,16
Orto	149.886 €	70.157 €	170.935,36 €	390.978 €	1,19
Terra & Libertà	119.016 €	54.816 €	332.802 €	506.634 €	1,74
AS Catel di Guido	217.464 €	73.076 €	106.789,77 €	397.330 €	1,14
Rete Verde	192.942	118,724,9€	239.104,00 €	432.046 €	1,82

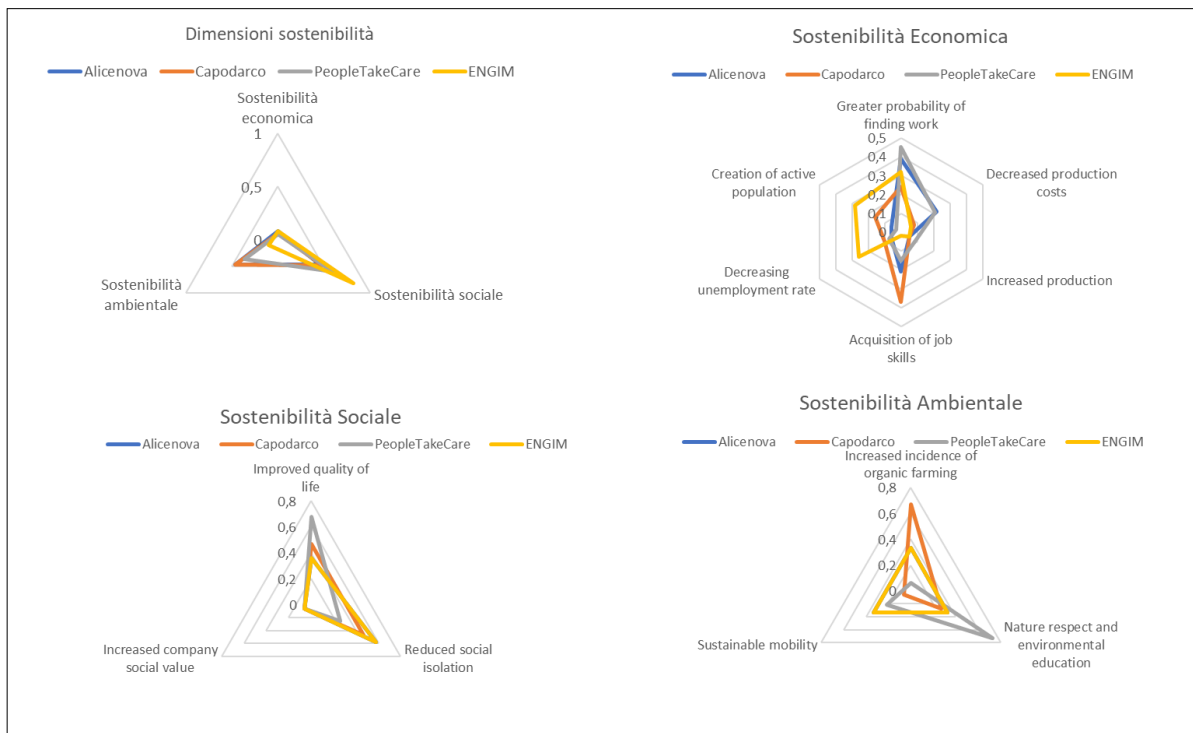
It should be emphasized that in the project phase the value of the incomes was 400,000€ for each individual project. Given the difference in the total number of users in the individual projects and in consideration of the link between the value of inputs and the number of work grants provided, the value of inputs was calibrated by the number of users interviewed within the projects. In this way, the different number of users in the individual evaluations does not affect the values of the SROI indices.

4.4.4 Sensitivity analysis: the Analytic Hierarchy Process

As pointed out in the methodology section, the Analytic Hierarchy Process was used in this work for two reasons.

First, certain aspects concerning the preferences of the leading actors regarding the economic, social and environmental impacts generated could not be observed through the other proposed methods.

With respect to this objective, Figure 1 shows the weights, and thus the preferences assigned by project leader to the dimensions of sustainability (economic, social and environmental) and the specific outcomes for each dimension.



About the sustainability dimension, we can observe how there are differences due to the type of proposing partner. In fact, actors from the agricultural sector within their production process were assigned the same weight to the three components, in contrast to six purely social actors who clearly assigned much more weight to social sustainability than to the other two dimensions.

Even with respect to the weights assigned to the individual outcomes that make up the individual dimensions of sustainability, we can observe how there are differences to be influenced by the type of proposing partner. For example, some actors, such as Engim, placed great emphasis on economic outcomes that however have a strong social value, such as the creation of an active population and the decrease in the unemployment rate. Indeed, this type of actors have always worked on social and labour inclusion in sectors other than agriculture. On the other hand, actors such as Agricoltura Capodarco and Alicenova, making real agricultural activities and production and built significant networks over the years with local farms, paid more attention to the outcomes produced for them, such as the decrease in production costs. This difference is also reflected in the environmental sustainability dimension, where greater weights was assigned to increasing organic farming for those projects that have

had a high degree of involvement of local farms, while a greater focus on teaching respect for nature and the environment for those actors, such as PeopleTakeCare, that have spent as much on training users.

These results, as we will discuss in more detail in the next section, fully reflect some of the differences observed in the quantification of outcomes in impact evaluations, such as the gaps that are present in the quantification of environmental impacts.

The second reason why AHP was used is the possibility to carry out a sensitivity analysis to reduce the bias of those who analysed the projects and thus a possible overestimation of the outcomes.

In the results shown in the SROI method, it was assumed that the three dimensions of impacts (economic, social and environmental) weighed on the outcome to the same extent, i.e. 33% for each dimension. Subsequent interviews with project leader revealed that this was not the case. Table 4 below shows the new values of the weights assigned to each component, resulting in a recalculation of the SROI indices.

Tabel 4: The average SROI

Progetto	Benefici Economici		Benefici Sociali		Benefici Ambientali		Totale	Average Value	Weighted Average
Innesta	333.450 €	8%	156.720 €	46%	455.527,84 €	46%	945.698 €	315.232,79	308.310,01 €
Custodi di Comunità	203.876,25 €	6%	72.744 €	48%	172.089,77 €	46%	448.711 €	149.570,19	126.310,99 €
AS Catel di Guido	217.464 €	5%	73.076 €	59%	106.789,77 €	36%	397.330 €	132.443,47	92.432,36 €
Rete Verde	192.942	8%	118.724,90 €	82%	239.104,00 €	10%	550.772 €	183.590,60	136.700,18 €

The actual weights assigned to the individual components lead to a decrease in the average value of the outputs. Consequently, there will be a decrease in the SROI index equal to the overestimated or underestimated value for each individual dimension. In fact, we can see how a strong overestimation of the economic impacts is partially offset by an underestimation of the outcomes of the social and environmental components.

4.5 Discussion of Results

The results of this study mainly concern different aspects, both at methodological and operative level.

Regarding the methodological level, the proposed qualitative-quantitative methodological process made it possible to thoroughly investigate the social farming and assess the impacts produced. In line with other studies in the literature (Dixon-Woods et al., 2004; Queiros et al., 2017; Dawadi et al., 2021) on the use of integrated methods, the integration of the four methods made it possible to unify qualitative techniques (focus groups, interviews) and quantitative techniques (identification of indicators and financial proxies). In fact, through this process, it has been possible to quantify the impacts resulting from social farming, thus making directly monetizable outcomes such as economic ones comparable with social and environmental ones for which a direct monetization is not possible. Furthermore, it was possible to investigate whether the differences in the values of the impact assessments derived from the context in which the projects were implemented, the type of the proposing party and the preferences they assign to the components of sustainability in their work. By integrating the results of each method, the territorial context affects the result to the extent that it concerns the take-up of actors and the involvement of farms in the area, thus impacting the final result of the assessment. Indeed, in rural territories with a strong experience of cooperation and agriculture, such as the Tuscia, Castelli Romani and Reatino areas, it was easier to establish lasting local networks that guarantee a greater value produced in all its dimensions. Also, the type of proposing partner, as observed with the BMC and AHP methodologies, has a great impact on the impact assessment, especially as regards the identification of outcomes, more than on the numerical result. In fact, as far as the impact of the project on themselves is concerned, for actors with agricultural production there is an impact concerning the increase in sales, which is obviously not present for actors without this characteristic. On the other hand, cooperatives or social associations, which have always operated in the sector of social and labour inclusion, have a greater capacity to insert people into the work market.

In addition, the AHP methodology made it possible to overcome some limitations of the SROI method highlighted in the literature (Arvidson et al., 2010; Banke-Thomas et al., 2015; Maier et al., 2015; Corvo et al., 2022), such as the challenge to the identification of outcomes and financial proxies and the consequent risk of overestimating them. Firstly, through the interviews conducted for the AHP, it was possible to validate the outcomes, indicators and proxies used together with the leading subjects, thus attempting to make the evaluation as objective as possible. Secondly, through the actual assignment of weights to each individual outcome, it was possible to calculate the actual weight assigned to each individual dimension of the impact, thus eliminating that part of the value that was tainted by overestimates of the outcomes. In fact, the value of the SROI indices, after application of the weights, decreased between 5% and 10% for each project.

The social farming projects analysed, regardless of the category of stakeholders they were aimed at, showed a positive impact on all categories of stakeholders. In fact, the values of the SROI indices are for all projects more than positive, showing a social return that varies between approximately 1.20€ and 1.80€ per euro invested. This result is in line with other applications of SROI to the social farming practices (Basset, 2023), but also with applications of this method in other scientific fields (Banke-Thomas et al., 2015). Comparing the results, we can see how the type of user impacts on some outcomes identified in the impact assessments, thus affecting the final result. In fact, while it is true that many outcomes can be standardized for all types of users, it is also true that for some types of users, such as migrants, ex-prisoners and people suffering from addiction, there is an additional impact on society compared to the other categories. Furthermore, the difference in the target groups of the projects also translates into a difference in the environmental impacts, with respect to the outcome of sustainable mobility. This outcome, in fact, manifests itself more for the people with physical or mental disabilities. It should also be pointed out that for some user categories, such as people with physical and mental disabilities and people with addictions, there are impacts concerning the users' families and local health services that were not included in the analysis.

Moreover, the different categories have, for various reasons that have precisely to do with the type of users, a different probability of socio-occupational inclusion. This last aspect highlights the two main limitations of the social farming practices. Firstly, the problem of continuity to be given to projects, since there is no data (Borsotto et al., 2023; Giarè et al., 2020) testifying to the impact of projects after their end. This causes a lack of precise measurement of success drivers (Nazzaro et al., 2021) and consequently no information on the long-term sustainability that projects can produce. Secondly, the quality of the training and internship period since different categories of users have different characteristics and needs, and therefore an 'ad hoc' course for each category would lead to the creation of greater value than that produced, as well as increase the acquisition of skills and consequently the likelihood of them finding work. Moving from project-based to system-based programming would partially resolve these critical issues. Indeed, as the AHP has shown, in a system where all actors cooperate to create an inclusive system, more attention would be paid to all the outcomes produced, instead of having differences in individual projects, thus generating much greater value. In addition, the role of the farm is crucial in this context, both in terms of the quality of the internship and the ability to absorb occupational demand. In relation to this last point, it emerged from the interviews, and is supported by the literature (Borsotto et al., 2023), how farms need to be restructured through a process of reconversion of production activities, which can thus be inclusive for all individuals. Administrative intervention is needed to help move towards long-term sustainability of the process, aiming at building an inclusive system.

The final value thus produced is certainly more qualitative than that produced by the SROI evaluation, although it must be emphasized that some limitations could not be investigated in this work. First, the AHP method proposed here was applied partially as it was integrated later into the proposed methodological process. In this way, it was not possible to have weights assigned to each stakeholder, and thus the sensitivity analysis is biased. Furthermore, given the lack of some data in the literature and the impossibility of incorporating them in the study, some outcomes were calculated by means of estimates, and this can still lead to an overestimation of the outcome itself.

4.6 Conclusion

The proposed integrated methodological approach allowed the study of the evaluation of social farming: SWOT and BMC methods made it possible to observe the differences present in the various projects that have an effect on the result of the impact assessment; the SROI made it possible to quantify social and environmental impacts on a par with economic impacts, allowing a comparison between them; the AHP made it possible to overcome certain specific limitations of the SROI. This allowed to investigate some characteristics that had not been investigated in previous studies in the literature.

The projects analysed have a positive social return ranging from around €1.10 to €1.70 per euro invested. The importance of expressing this value in monetary terms lies in the implications in terms of welfare and agricultural policies, which often follow the 'affordability' of a project, as opposed to its impacts.

The study can contribute to the debate on the evaluation of social farming and an indication to policies that could overcome certain limitations concerning SF. Some areas remain to be investigated that would allow an even greater understanding of the topic.

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5 - Discussion of results

In this thesis an integrated methodological approach was developed for the study of Social Farming (SF) evaluation. This approach is composed by four qualitative and/or quantitative methods: SWOT, Business Model Canvas (BMC), Social Return on Investment (SROI) and Analytic Hierarchy Process (AHP). The using of this approach, in line with the literature on integrated methodology's theme, allowed to observe different characteristic of SF had not previously been investigated.

The evaluation process it was conducted by a Civil Economy perspective. Indeed, the aim of this thesis is to emphasize the impact of SF, placing the well-being of individuals central to the process.

The research area of this thesis, the evaluation of SF, appears to be relevant in countries, such as Italy, where SF is included in national and regional development plans. The creation of a methodological process, from a civil economy point of view, to quantify the social and environmental impacts, as well as the economic ones, generated by SF practices can have serious implications for economic and social systems. SF plays a crucial role in the achievement of rural development objectives and in the creation of regenerative welfare, and its evaluation is of important in order to grasp the opportunities that these practices offer at local levels, and to understand the areas of intervention that can improve the effectiveness public funds addressed to it. In this regard, the creation of processes that focus on the wellbeing of individuals to create aggregate value from multiple components, not just the economic one, is of paramount importance, as witnessed by the United Nations 2030 Agenda.

The indicators and measurements proposed in this research, through the application of SROI, offer new insights into the progress made in the field of social farming evaluation. Besides providing an appreciation of the social and environmental impacts produced by social farming, they offer a guideline in terms of evaluation and monitoring for national and local public bodies. In this context, the main result concerns the proposal of a methodological experimental design, applied across various experiences on the field. The integrated approach proposed offers a contribution to the literature on the quantification of social impacts, with particular regard to a

shared evaluative process replicable across other instances of SF. Preliminary qualitative methodologies (SWOT and BMC) made it possible to investigate the implementation context of SF projects and the typology of the proposing actors. Moreover, integrating this information with the results of the impact assessment (SROI) has enabled to investigate the differentials present. The SROI allowed to quantify social and environmental impact, as economic once. The Analytic Hierarchy Process (AHP), that has been used as a sensitivity analysis of the SROI method (Chapter 4), partially overcame limitations concerning the overestimation of impacts observed in the initial application of the method (Chapter 2) and in the literature review on evaluation methods used for social farming (Chapter 3).

An effective and shared evaluative approach is increasingly vital. On one hand, universities and/or research institutions are engaged in recent social farming projects to ensure evaluation and monitoring processes. On the other hand, the National Observatory for SF is responsible for providing indications for the recognition of SF operators and for the evaluation and monitoring of the practices. However, literature lacks sufficient data and applications of evaluation methodologies for the study of SF. Furthermore, this work may provide guidance on the use of certain indicators, regardless of the methodology used, for quantifying the impacts of social farming. It may also offer guidelines for the National Observatory concerning the establishment of ATs and the involvement of recognize entities.

The second main result of this thesis concerns various applications of the methodologies to different project. These can provide data collection instrument useful for local authority and researcher on this theme. These data include drivers of success, the outcome and the indicator for the impact quantification and the value that SF produced for all stakeholders. Indeed, through the integration of the four methods proposed in this thesis, it was possible to observe characteristics of SF not previously identified in literature.

Firstly, impacts on all recipient categories were quantified for the first time, allowing for comparison of results across different categories, highlighting strengths and weaknesses. It was observed that certain characteristics of individual categories may affect the results due to standardized SF paths not meeting specific needs.

Secondly, the central role of the agricultural enterprise in the process and the importance of networking between the social, agricultural, public, and private sectors were highlighted. The importance of SF for the agricultural system was underlined by its contribution to sustainable agricultural practices. Furthermore, the central or potential role of the farm in the processes concern mainly the quality of internship services offered and the potential for job creation. It has been observed that in contexts characterized by strong territorial networks between public entities, social cooperatives, and agricultural enterprises, social farming projects tend to be more successful, with more significant social and environmental impacts for all stakeholders. The Civil Economics theoretical framework adopted places individual well-being at the centre of the analysis and requires stakeholder involvement demonstrating to all, from recipients to cooperatives and local institutions, the importance of an evaluative process for SF projects. The importance lies not in the "economic convenience" shown by impact quantification, but in the enhancement of well-being for all individuals. This led to an awareness among all stakeholders that evaluation processes can bring about continuous and lasting change in the social farming systems. Furthermore, based on other evaluations carried out from the perspective of Civil Economics in other fields, a preliminary comparison was made between the indicators used in this thesis and the specific targets of the Sustainable Development Goals.

Another result of this thesis concerns the political implications it has highlighted. In recent years, in fact, social farming has increasingly gained a foothold in international and national development plans in relation to its capacity to create opportunities for the achievement of rural development goals and welfare creation. In this context, the importance of providing a methodological approach for the evaluation of SF practices lies in the implication it can provide for the efficient implementation of the SF within policies.

In this case, this work has on the one hand made it possible to grasp the opportunities that SF produces, through the creation of a value composed of a strong social and environmental component, and on the other hand the presence of challenges and threats for local authorities in producing adequate agricultural, social and welfare policies that can increase their

effectiveness. One of the most significant challenges is certainly that of giving continuity to SF projects, creating a system that is not limited to generating value within a single project, but one that allows lasting value to be generated over time.

In addition, projects usually last 10-12 months and there are no systems for monitoring or protecting project recipients at the end of the projects. This results in a low proportion of recipients being able to achieve lasting socio-occupational integration. Besides being important from a collective point of view, as only lasting value over time can aim to achieve development goals, it also has great relevance from the individual point of view of those involved in social farming projects. Firstly, the failure of the users to be socio-occupationally integrated at the end of the project may cause not only the loss of the improvements achieved during the project period, but a worsening of their initial situation. This worsening, in addition to being a defeat since the primary objective of SF is to improve the well-being of individuals, may cause pressure on the health and social reference systems, and create a social cost for the entire system. Agricultural and social policy interventions could improve this situation and make the implementation of social farming in national policies more efficient.

Social policies that aim at the provision of more lasting projects, if not at overcoming them in order to aim at the creation of a process that can be inclusive for all individuals, are needed. This process can be constituted by encouraging public and private actors, in the social and agricultural sectors, to create strong and durable local networks that can exploit the characteristics of each subject to produce greater and lasting value over time. To this end, this paper provides guidelines on which subjects should be included in territorial networks and which characteristics distinguish one actor from another. Secondly, it is necessary to have policies that can protect users from SF projects on the labour market, to guarantee their access. An important role can also be played by agricultural policies. Indeed, farms can and should play a central role within the SF practices for at least two reasons. Firstly, farms are able to ensure higher quality of the apprenticeships experience for recipients. Policies that place the farm in a central position within the process, instead of relegating it to a position of 'host'

location for the internship service, could identify adequate procedures and interventions to strengthen their role and competences. In this way, the farm could decide on the internship service to be provided, making it appropriate and more efficient for the individual it includes. There is no doubt, in fact, that people have different characteristics and needs, and therefore an individual diversified internship would certainly lead to a better and more efficient acquisition of skills. Furthermore, policies that aim at support farms that decide to participate in SF projects could accompany them towards choices of more labour-intensive approaches, such as organic farming. Finally, policies that promote the marketing of products from SF (i.e. public procurement) could reduce the gap due to the lack of knowledge of the added value and the higher cost incurred.

Finally, the studies in this thesis work have limitations that are worthy of discussion. One common to all the studies is the lack of data from the application of methodologies for evaluating SF projects. This stems from two main aspects: i) the difficulty, given the dependence of SF on a project form, of carrying out evaluations and collecting data after the end of the projects; ii) the need to use estimates in the quantification of certain social impacts. The monitoring of success drivers and further methodological applications to the phenomenon would allow researchers to collect useful data regarding the results in terms of social-work placements, thus reducing the use of estimates and right indicators and financial proxies. Another limitation of this thesis is the different number of stakeholders interviewed in the specific methodologies, since the different durations of the projects. In fact, it was not possible to interview users and farms at the end of the project in order to include them in the AHP methodology, thus limiting the validation of the outcomes to the proposing subjects and the consequent sensitivity analysis to the proposing subjects. Therefore, AHP is proposed in this paper more as a methodological adjustment than as an empirical example on a case study.