sustainability

MDPI

Article

What Are the Impacts of Social Innovation? A Synthetic Review and Case Study of Community Forestry in the Scottish Highlands

Carla Barlagne [1,*], Mariana Melnykovych [2,3], David Miller [4], Richard J. Hewitt [4], Laura Secco [5], Elena Pisani [5] and Maria Nijnik [1]

1 Social, Economic and Geographical Sciences Department, The James Hutton Institute, Craigiebuckler, Aberdeen AB15 8QH, UK; maria.nijnik@hutton.ac.uk
2 Economics and Social Sciences Research Unit, Swiss Federal Institute for Forest, Snow and Landscape Research, WSL, Zürcherstrasse 111, 8903 Birmensdorf, Switzerland; mariana.melnykovych@wsl.ch
3 European Forest Institute, St. Antoni Maria Claret, 167, 08025 Barcelona, Spain
4 Information and Computational Sciences Department, The James Hutton Institute, Craigiebuckler, Aberdeen AB15 8QH, UK; david.miller@hutton.ac.uk (D.M.); richard.hewitt@hutton.ac.uk (R.J.H.)
5 Department of Land, Environment, Agriculture and Forestry (TESAF), University of Padova, Via dell'Università, 16, 35020 Legnaro (PD), Italy; laura.secco@unipd.it (L.S.); elena.pisani@unipd.it (E.P.)
* Correspondence: carla.barlagne@hutton.ac.uk

Abstract: In a context of political and economic austerity, social innovation has been presented as a solution to many social challenges, old and new. It aims to support the introduction of new ideas in response to the current urgent needs and challenges of vulnerable groups and seems to offer promising solutions to the challenges faced by rural areas. Yet the evidence base of the impacts on the sustainable development of rural communities remains scarce. In this paper, we explore social innovation in the context of community forestry and provide a brief synthetic review of key themes linking the two concepts. We examine a case of social innovation in the context of community forestry and analyse its type, extent, and scale of impact in a marginalized rural area of Scotland. Using an in-depth case study approach, we apply a mixed research methodology using quantitative indicators of impact as well as qualitative data. Our results show that social innovation reinforces the social dimension of community forestry. Impacts are highlighted across domains (environmental, social, economic, and institutional/governance) but are mainly limited to local territory. We discuss the significance of those results in the context of community forestry as well as for local development. We formulate policy recommendations to foster and sustain social innovation in rural areas.

Keywords: social impact; well-being; governance; scale of impact; rural development policy

Citation: Barlagne, C.; Melnykovych, M.; Miller, D.; Hewitt, R.J.; Secco, L.; Pisani, E.; Nijnik, M. What Are the Impacts of Social Innovation? A Synthetic Review and Case Study of Community Forestry in the Scottish Highlands. *Sustainability* **2021**, *13*, 4359. https://doi.org/10.3390/su13084359

Academic Editor: Ricardo García Mira

Received: 1 March 2021
Accepted: 6 April 2021
Published: 14 April 2021

1. Introduction

In a context of political and economic austerity, communities of policy, practice, and academia are seeking ways to foster the sustainable development of communities and rural communities, particularly through social innovations [1,2]. Indeed, in many policy discourses, social innovation (SI) has been presented as a solution to many kinds of old and new social challenges at a time when there is growing economic pressure on public administrations that lack the capacity, capability, or political will to solve these challenges [3]. SI has been included in the European Union 2020 strategy for smart, sustainable, and inclusive growth as a concept that supports processes of social change. It aims to support the introduction of new ideas in response to the current urgent needs and challenges of vulnerable groups [4]. SI seems to offer promising solutions to the challenges faced by rural areas today [5].

Recognition of these challenges, such as demographic change, connectivity, low levels of income, and limited access to services, led the European Union to plan a Long Term

Vision for Rural Areas, due to be published in the summer of 2021 [6]. This provides further context for encouraging the development of visions by local communities for their rural areas. SI has been shown to be an effective process for enacting such visions, triggered by the need to tackle challenges facing societies and stimulating territorial development in different biophysical and socio-economic contexts [7].

The increased interest in SI reflects evidence emerging that it can be a driver of a process of development and a means of fostering the sustainable development of rural communities [8]. For the purposes of this study, we define SI as "the reconfiguring of social practices, in response to societal challenges, which seeks to enhance outcomes on societal well-being and necessarily includes the engagement of civil society actors" [9]. As a development process, SI overlaps with concepts of community empowerment [10], grass-roots initiatives e.g., [11], and bottom-up innovation e.g., [12]. It embraces notions of community resilience and vulnerability, community capacities, and the development of the community asset base, which it fosters to some extent.

However, critics have cautioned that this enthusiasm for SI as a "magical" recipe and its potential key role in future policies of the new rural paradigm risks further legitimising neoliberal policy paradigms, leading to even less attention being granted to rural areas. In fact, there is little empirical evidence about the significance of different types of, and extents, of impacts created by SI. There is a need therefore to examine which types of SI are driving impacts in rural areas and the nature of those impacts.

Our paper aims to address this knowledge gap and investigate and assess the impact of SI on rural communities and their sustainable development, using in-depth evidence from a case study of community forestry (CF) in Scotland, UK.

In Scotland, UK, SI processes have the potential to increase their scope due to communities being central to recent policy and institutional developments, notably the land reform process and community ownership movement [10,13]. In this context of community empowerment in Scotland, CF has become one of the ways in which urban and rural communities have regained ownership over natural assets and are now striving to improve local conditions. CF, in the Scottish context, is a form of natural resource governance in which woodlands management is entirely or partially undertaken by local communities. It is characterised by a wide range of networks, contractual arrangements, and public-private partnerships involving local communities and their representative bodies, community development companies, private land owners, and Scottish Forestry Research (formerly known as the Forestry Commission) [14,15].

CF embraces a broad range of governance and social practice reconfigurations, some of which can be classified as social innovations. The conceptual foundations of CF point to its potential to create positive impacts in many areas (see the review by [16]). These include fostering sustainable livelihoods, improving food and energy security, encouraging more ecologically sustainable forest management, improving governance, promoting biodiversity [16], strengthening resilience to climate impacts (e.g., through carbon forestry), positively impacting human health [14], and helping communities recover from the challenges of COVID-19 [17]. However, the reality of CF—reflecting outcomes from the implementation of CF across a wide range of contexts—is more complex. Indeed, while impact studies have pointed to the positive impacts of CF on the environmental dimension of sustainability, the evidence of those impacts on the economic and social dimension and on benefits to communities remains limited [16,18]. In the British context, earlier studies of community woodlands have highlighted the lack of evidence of woodland benefits to communities and the absence of a consistent approach to impact measurements [15,19]. According to these authors, this hinders comparability between case studies and the relevance of the evidence base for developing supporting policies. Recent studies have analysed factors leading to the emergence and development of SI [20–22] and the policies supporting SI in the forestry sector [3,23–26]. However, there are still few studies providing detailed evidence of the impact of SI on rural development in the context of CF.

Our article aims to fill this research gap by addressing the two following questions:

(a) Does SI expand the impacts of CF on rural development and if so, how? Specifically, what are the impacts of CF as a form of SI on the social dimension of rural communities and on their well-being?
(b) What are the types, extents, and scale of the impacts of socially innovative CF in marginalised rural areas?

To achieve this objective, we first assess CF as a SI phenomenon in relation to the definition developed by the SIMRA project [5,9]. The SI examined in this paper refers to the acquisition of a woodland (Kirkton woodland) and its management by the community in order to create positive outcomes and well-being for community members in terms of increased positive amenities from the woodland. The reconfiguration of social practices refers to the novel governance arrangements and relationships of the community with the woodland, and the relationships between members within the community. Such a reconfiguration relates to societal challenges created by a declining and ageing population, and a location in the Highlands of Scotland with relatively poor accessibility [27]. We investigate the types of impacts that SI produces and discuss whether the impacts of CF as a form of SI can foster the empowerment of rural communities and increase their well-being.

We take as our starting point the SIMRA evaluation framework [28] and a set of indicators specifically developed for the purpose of the evaluation. We use these to assess the changes brought about by the SI in terms of "reconfiguring of social practices in response to societal challenge that increase outcomes on social well-being and necessarily engage the civil society". We also examine the scale and extent of the impacts of the SI initiative. We use a case study approach and mixed research methods to enable a deep understanding of the situation and context of the SI initiative [29].

With reference to the Scottish case and in light of the literature on CF, we argue that SI in the context of CF reinforces some of the dimensions of CF, particularly the social dimension. The impact of SI across different dimensions (environmental, social, economic, and institutional/governance) and scales is discussed by Ravazzoli et al. ([7], in this special issue). In this paper, we focus on the dimensions arising from SI for the specific case of CF. We examine the type of impacts generated by the SI initiative and the scale and extent of those impacts.

This article is organised as follows: Section 2 explores the role of SI in community development and provides a brief review of key themes and theoretical considerations linking CF and social innovation. Section 3 introduces a case study, methods, and indicators used in the evaluation. Section 4 highlights the impacts of SI on the CF initiative and the type, scale, and extent of impacts it can create. In Section 5, we reflect upon the diversity of outcomes and impacts made available to the community as a result of the SI and we formulate policy recommendations aimed at sustaining the emergence and development of SI initiatives. Finally, we provide concluding remarks in Section 6. For scholars in the field of CF, this paper provides evidence of the nature and extent of the impacts of SI on CF. For scholars in the field of SI, it provides insights into the potential and specificities of SI as a form of governance of the natural environment.

2. Theoretical Background

2.1. The Context for Social Innovation in Community Forestry in the UK

Community forestry (CF) in the UK, and in Scotland in particular, is part of the new rural paradigm that characterises recent policies related to rural development policy and contributes to revitalising marginalised rural areas of Scotland [21,27]. Scotland's forests and woodlands can contribute to creating and sustaining thriving rural communities by providing good quality jobs and attractive environments, and by supporting the provision of affordable rural housing.

CF is a form of natural resources governance in which woodland management is entirely or partially undertaken by local communities. It is characterised by a wide range of networks, contractual arrangements, and public-private partnerships involving local

communities and their representative bodies, community development companies, private land-owners, and Scottish Forestry (formerly known as the Forestry Commission) [14,15].

Having emerged in the 1980s into an institutional vacuum, and mostly due to the motivation and tenacity of core groups of dedicated individuals in the 1980s, CF now benefits from an enabling environment and enhanced institutional and legal provisions through policies targeting community empowerment, community ownership, and community asset transfers [14,27,30]. Those provisions facilitate and enable access to natural assets by communities and the improvement of their well-being, quality of life, and life chances, as well as providing economic returns [31].

CF has been shown to provide numerous communal and environmental benefits such as community cohesion and stability, as well as increased biodiversity, conservation, and carbon sequestration [31,32]. The greater involvement of communities in decisions about forests and woodlands, and in their direct management and ownership, also helps to increase the control and influence of communities over their local environments [16]. In turn, this leads to greater community empowerment through the redistribution of power and resources from central government to local resource users [33].

Nonetheless, in the context of the UK, there is little repeatable, systematic evidence of the impact of CF on communities' well-being [15]. Lawrence and Ambrose-Oji [19], reviewing 70 studies (covering 681 evaluation cases) highlighted positive impacts in the biophysical domain but only limited evidence of impacts in the social domain. The authors attribute this weakness of the evidence base to the absence of clarity of the concept of community woodlands (which they address by proposing a typology of community woodlands) and to the subsequent lack of a systematic impact evaluation framework across cases.

Scotland's Forestry Strategy 2019–2029 sets out a 10-year framework for action including a priority to "engage more people, communities, and businesses in the creation, management and use of forests and woodlands" [34]. Currently there are approximately 200 community woodland groups in Scotland that are involved in owning or managing forests and woodlands, some of them through socially innovative initiatives. This represents almost 7000 ha of land, which has been transferred from the National Forest Estate [34]. Given this context, providing an assessment of the impact of SI in the context of CF is key to informing future policies in the Forestry and Rural Development sector [23].

2.2. Potential of Social Innovation for Communities' Sustainable Development

Communities located in marginalised and remote rural areas are facing difficulties of delocalisation of industry and loss of economic activities, population ageing and migration, increasing poverty, growing economic inequality, consequences of global environmental change and financial crises, loss of ecosystem services, and the reduction of services and welfare [4,35–37]. In those communities, SI offers solutions that cultivate and implement new ideas that have the potential to deliver value and foster sustainability transformations [36,38,39].

Social innovations are recognised as having the potential to turn challenges into opportunities [3,40]. Our understanding of SI is that of "the reconfiguring of social practices, in response to societal challenges, which seeks to enhance outcomes on societal well-being and necessarily includes the engagement of civil society actors" [9]. In this sense, SI contributes to the sustainable development of communities through the provision of innovative products and services that answer emerging needs of communities, and by enabling processes of change aimed at increasing the welfare, well-being, and empowerment of communities [2,41].

In line with the definition of Polman et al. [9], SI leads to the emergence of new networks, building trusting environments and partnership, and the creation of new values, rules, and governance arrangements [42]. It leads to changes in values, behaviours, and identities through social learning processes [43–45] that are complex but essential to capture. They are collective actions, nurtured or constrained by the socio-economic (including

institutional) and environmental contexts that may substantially influence the well-being of local community [46].

At the heart of SI are the actors involved (individuals, organisations, and groups of people) interacting with each other, in order to achieve a shared goal [45,47]. That goal targets improvements in collective well-being that will be institutionalised ultimately if the process is successful [48–51].

SI initiatives typically emerge in response to specific social needs or broader societal challenges [37] by mobilising people's creativity, promoting innovative learning, and supporting social dynamics that foster technological innovations [52] (p. 7). Valero and Bryce [53] document over 200 examples of SI initiatives that aim to promote sustainable development goals at a local level. Examples located in Scotland, UK, provide evidence that social innovations can respond to social needs by creating opportunities for local employment, housing, skills enhancement, sustainable management of natural resources, cultural heritage, and building trust among people and new networks.

In the context of CF, Sarkki et al. [54], reflects upon the role of human values in SI and highlight the fact that SI foster relational values (namely doing, belonging, and respecting). The authors point out that while those values trigger the initial involvement of stakeholders in social innovation, they also, conversely, develop as a result of the stakeholders joining and engaging with the SI idea. As such, they provide evidence that SI is locally embedded and reinforces relationships between the human and non-human world. Vercher et al. [21] have highlighted the importance of co-constructed narratives for community cohesion. Key features of those narratives comprise concepts such as marginalisation, the natural environment, and community activation. Narratives foster the creation of better social relationships while enabling collaboration and participation. As such they are a powerful means of encouraging collective action. These examples suggest scope for SI to scale-up and scale-out [21,27].

3. Materials and Methods

3.1. The Social Innovation Evaluation Framework

The evaluation of SI seeks to provide information on the performance of SI and its outcomes through a systematic and objective assessment. It aims at determining the relevance and fulfilment of objectives, efficiency, effectiveness, impact, and sustainability of actions implemented by the SI initiative [55,56]. It also aims to address weaknesses of previous approaches to evaluation in various domains (e.g., CF, rural development, and sustainability) such as the lack of a systemic approach, a focus on outputs at the expense of outcomes and processes, and a lack of relevance with regards to the needs of the end-users [19,57–59].

The framework developed by Secco et al. [29] (see also 7, in this Special Issue) is derived from a result-chain approach, based on a theory of change that highlights the cause-effect relationship between different factors, processes, and activities that lead to tangible outputs and outcomes. Developed in the context of a science-stakeholder collaboration, it enables the combination of the knowledge of expert and local actors gained through participatory activities [37]. The framework enables a consideration of the interdependencies, and complexities across scales and activities. As such, it provides *"clear links between context, model, and impact"* and in the evaluation it distinguishes between outputs, outcomes, and process [19] (p. 270). It is of a holistic nature, required in approaches appropriate to the evaluation of SI [57].

In this paper, we present a detailed assessment of the impacts of a SI in CF in the Highlands of Scotland, UK. To provide an answer to our first research question, we analyse how CF, as an example of social innovation, reflects the key components of the SI phenomenon, and how these components enhance the impacts of CF. First, we examine how challenges, which motivated the Lochcarron SI initiative led to the reconfiguration of specific societal practices. We reveal the process of reconfiguration of networks, governance arrangements, and attitudes, which led to new and innovative arrangements regarding the ownership

and management of the woodland and empowerment of the local community. Next, we investigate the perception of the members of the community towards the reconfiguration of social practices, the SI responses to societal challenges, and the outcomes for their well-being; explore whether the engagement of civil society has been proactive and determined to create impacts; and the innovativeness of the CF initiative as perceived by the local community. To provide an answer to our second research question, we reflect upon the impact of the SI initiative on tackling problems of rural marginalisation by focusing on the scale and extent of impacts.

In the following, we describe the SI case study and present the applied methodology.

3.2. Case Study Description

Kirkton Woodland, located immediately to the north-west of the village of Lochcarron, is a coniferous woodland of uniform age, located on open, south-easterly facing, moderate, or gentle slopes. The woodland consists of mainly Lodgepole Pine (*Pinus contorta*) and some Larch (*Pinaceae*) and Sitka Spruce (*Picea sitchensis*). A small number of mixed broadleaved trees also exists within the woodland but these are mainly restricted to the edges of the river along the eastern boundary. The area referred to as the local community encompasses the settlements of Lochcarron, Strathcarron, and Kishorn in Wester Ross, Scotland, United Kingdom. It covers an area of approximately 320 km^2.

The local community is characterised by an ageing, elderly population with a declining school population. Due to limited employment opportunities in the area, there is little prospect of retaining young people and consequently there are low numbers of people of an employable age. The area is popular as a retirement location, with a high number of second homes. This has contributed to a diminishing resident working population, adversely impacting the viability of local businesses and resulting in the deterioration of local services. The Lochcarron Community Development Company (LCDC) is a community-run organisation with the aims to manage community land and associated assets for the benefit of the community and the public in general; to advance the education of the community about environment, culture, and history; to advance the arts, heritage, culture, and science; and to provide training and employment opportunities, all aiming to aid local sustainability. In 2011, following a community ballot on the buy-out of the Kirkton woodland and complying to a requirement of their application to the National Forest Land Scheme, LCDC purchased Kirkton woodland for the benefits of the community.

3.3. Methodology

We used mixed methods to address our research questions through a case study approach [60], integrating qualitative and quantitative methods to evaluate the impact of the SI, as suggested by Secco et al. [61] through a detailed analysis of our case study. Sequential steps of the research process are detailed in the following sub-sections.

3.3.1. Data Collection

Our case study approach focused on obtaining a deep understanding of the perception of local actors, using a purposeful sample of the key stakeholders and actors of the SI rather than a quantitatively representative sample of the SI actors [62]. Such an approach is used in qualitative research e.g., [63] to obtain accurate information on the perceptions of actors on specific issues that can be measured using a rating scale that quantitatively assesses opinions, attitudes, or behaviours (e.g., via Likert scale).

A set of tools was employed for the collection of data, which took place between March and August 2018 (see Table 1 for a summary of the data collection process). Information and the content of the tools used are described in detail in Secco et al. [61].

Table 1. Data collection summary: type of interviews, type of respondents and sampling.

Focus Group Participants	Semi-Structured Interviews		Structured Interviews			
	Core Group	Policy Makers and External Experts	Core Group	Network Members	Project Partners	Beneficiaries
5	2	5	1	1	3	5

The tools were tailored to the type of actors and role they had in the SI initiative. As such, the types of informants interviewed comprised: The core group of social innovation, network members, project partners, beneficiaries, as well as policy makers and external actors to the SI experts (see Table 2).

Table 2. Characteristics of key stakeholders interviewed (according to Secco et al. [61]).

Typology of Stakeholders	Characteristics
Core Group	The initial group of innovators and their first follower(s), i.e., those who were involved at the preliminary stages of originating a social innovation (SI) initiative
Network members	The actors and organisations that enter into the process of development of the SI initiative at a later stage.
Project partners	Each individual, organisation, enterprise, institution, or network that contributes technically to the SI project(s) and is responsible for the implementation of one or several project actions.
Beneficiaries	Direct beneficiaries are those who benefit directly from the outputs and outcomes of the SI project. Indirect beneficiaries are those who are linked with a relationship to direct beneficiaries and so will indirectly benefit from the outputs and outcomes of the SI project, thus experiencing the impacts of social innovation.
Policy makers	Indirectly interested actors involved in decision-making in the area and who hold special knowledge on the SI initiative.
Other experts, external to the SI	Indirectly interested actors or with special knowledge in the SI initiative.

The tools were used in the sequence detailed here. Data collection started with a review of relevant literature in order to understand the context of the initiative, followed by a focus group discussion with five key informants. The focus group followed a specially designed template (i.e., Tool 2) [61] and generated qualitative and quantitative information on informants' perceptions, measured on a Likert scale. This approach enabled the co-construction of the storyline of the social innovation, evaluation of perceptions of societal needs, and pre-assessment of the impacts of the SI initiative on the rural area.

Next, structured interviews (questionnaires) were carried out. The questionnaires were specifically designed for different types of SI actors and applied in order to accurately capture the information on perceived changes and evaluate issues related to different phases of the development of the SI development and its impact. Then, in-depth face-to-face semi-structured interviews were conducted that enabled the capture of the richness of the context and to understand better the processes involved. Those interviews lasted from 45 to 90 min.

In total, 18 interviews were conducted: 11 structured interviews (questionnaires with open and closed questions) with SI actors (core group, network members, project partners, and beneficiaries), and 7 semi-structured interviews (open questions, storytelling) with experts with internal (2 respondents) and external (5 respondents) knowledge about the social innovation. The qualitative information obtained through expert interviews was recorded and subsequently transcribed and analysed using a content analysis approach.

3.3.2. Data Analysis

The interviews and information obtained from the focus group discussion provided a basis for the analysis and evaluation of the SI and data analysed using qualitative and quantitative methods. Triangulation was undertaken using both types of data collected through different sources of information and from different informants.

The qualitative information was analysed using a content analysis approach performed with the NVivo 12 qualitative data analysis software manufactured by QSR International's, Victoria, Australia [64] (https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/support-services/faqs(accessed on 2 March 2021)). The analysis comprised 12 overarching codes reflecting the key elements of the evaluation framework proposed by Secco et al. [29,61]. Those codes were: Respondent role, case study, needs and motivations, project content and activities, role of information, resources, actors and agency, networks and coordination, policies and institutional frameworks, overall assessment, outputs and impacts, and outcomes.

The quantitative data (e.g., perceptions, attitudes, etc.), collected through the structured interviews and the focus group discussion were used to calculate the indicators, following the methodology and formulae conceptualised in Secco et al. [29]. The methodology was designed for the specific purpose of evaluating social innovation. It is based on the identification and analysis of cause-effects relations in key dimensions associated with the process of development of a social innovation, from its conceptualisation to its implementation, and its final outputs and outcomes. Such relations are analysed by means of ad hoc developed indicators that measure information on, for example, the role of external versus internal resources in supporting social innovation. The indicators build on the data from different types of respondents as reflected in Section 3.3.1. In Table 3, we present a short description of the indicators used to respond to the first research question on CF as a SI phenomenon. The contents of Table 3 include the source of the data (respondent type) used for calculating the indicators. The normalised indicator values range from a minimum value of 0 to a maximum value of 1. The value of the indicators is presented in Appendix A.

Table 3. List of indicators reflecting the social innovation dimensions (source: Based on Secco et al. [61]).

Dimension	Name and Meaning of Indicator		Type of Informant
Reconfiguring social practices	A1	Actors' perception of the extent of the reconfiguration/reconfiguring process.	Core group, Network
	A2	Perceived level of innovation in the SI process.	Core group, Network
Response to societal challenges	B1	Capacity of the SI to tackle multiple European societal challenges.	Core group, Project partners
	B2	Perception of actors of the European societal challenges being improved in the territory due to the SI initiative.	Core group, Project partners
Outcomes on social wellbeing	C1	Beneficiaries' perception of changes in social cohesion inside and outside the territory.	Beneficiaries
	C2	Contribution of the SI initiative to the improvement of governance aspects in the territory.	Core group, Project partners
Engagement of civil society	D1	Actors' motivation for engaging in the SI initiative.	Core group, Network
	D2	Actors' participation in network meetings.	Core group, Network
Perceived innovativeness	E1	Internal validation of the innovativeness of the SI initiative.	Core group, Network, Project partners, Beneficiaries
	E2	External validation of the innovativeness of the SI initiative as perceived by the actors.	Focus group participants, Core group

The list of indicators reflecting the type of the impact that CF as an example of SI has on the well-being of the community and the development of the area are presented in Table 4. The value of the indicators is presented in Appendix A.

Table 4. Indicators reflecting the domains of impact of the social innovation and the extent of its impacts.

	Name and Meaning of Indicator		Respondent Type
Domains of impact	F_actors	Actors' perception of the balance between the specific positive and negative impacts of the SI initiative on the four domains.	Core group; project partners; beneficiaries
	F_soc	Environment.	
	F_eco	Economic.	
	F_env	Social.	
	F_ins	Institutional/governance.	
Scale and effect of Impact	G1	SI process actors' perceptions of being able to make a difference through the SI initiative.	Core group; project partners; beneficiaries.
	G2	Overall level of satisfaction with the results of the SI initiative.	Core group; project partners; beneficiaries.
	G3	Proportion of marginalisation problems improved by the SI initiative, as perceived by stakeholders.	Stakeholders taking part in the focus group
	G4	Level of effects of the SI initiative inside the territory in the four domains, according to the actors.	Core group; project partners; beneficiaries.
	G5	Level of effects of the SI initiative outside the territory in the four domains, according to the actors.	Core group; project partners; beneficiaries.

(Source: Based on Secco et al., [61]).

The indicators were interpreted in conjunction with qualitative information from semi-structured interviews with experts and additional information collected from other sources (e.g., literature review) in order to triangulate the findings. The triangulation process provided a cross-check against inaccurate or incomplete information in order to ensure the quality of the resulting indicators [27,65]. Finally, the findings from the evaluation were used to draw conclusions that could potentially help with the design and implementation of the SI initiative in future.

4. Results

In this section, we first show how challenges, which motivated the Lochcarron SI initiative led to the reconfiguration of specific societal practices as a result of that initiative. We reveal how CF, as an example of social innovation, reflects the key components of the SI phenomenon and how these components enhance the impacts of CF. Although the definition of SI and the evaluation framework enable a consideration of the reconfiguration of social practices and then of the societal challenges, in this paper we describe the societal challenges as an entry point for the reader to understand the context that has led to the reconfiguring of social practices. Therefore, we should read a SI initiative as *an answer to societal challenges, leading to the reconfiguring of social practices that involve the civil society, contains elements of novelty, and aims to increase the well-being of the society*. In the second instance, we reflect upon the impact of the SI initiative on tackling problems of rural marginalisation.

4.1. Impact of Community Forestry as a Form of Social Innovation on the Social Dimension of Rural Communities and on Their Well-Being

4.1.1. Response to Societal Challenges

Results from the Focus Group indicate that the CF initiative has emerged as a response to a number of characteristics of marginalisation such as: (i) The geographical remoteness of the community, which generates difficult access to services as well as lack of choice in services and products available; (ii) the poor quality of the land, which restricts the number of opportunities available for farming; and (iii) the size of the area, which increases difficulties of communication and travel between different communities within the same area, and acts as a further drag on governance and service provision. One of the informants observed:

> 'It's a large area with not much infrastructure so there is not a lot of transport around', and that 'It is a large area to administer for a community council' (LAG001).

Other factors judged to be problematic for the area were: The poor quality of the road network, the lack of public transport, private ownership of land, lack of businesses and business opportunities, poor broadband internet connectivity, the lack of employment opportunities that lead to youth out-migration, lack of affordable housing for local people, and a lack of sense of place. Existing employment opportunities are limited to fish farming, tourism, and the care sector.

The SI originated as a response to an opportunity open to community actors—namely, community purchase of the forest land. After the community subscribed to the 'Growth at the Edge' programme, one of their objectives was to purchase the woodland and develop it as an asset. The community was motivated by the desire to transform a commercial forestry plantation into a public amenity. One informant stated:

> 'The community agreed that they wanted to buy the woodland and that if a private landowner or speculator had bought it then the community would have no input into it, and it would not benefit the community. They [the community] didn't want another blanket Sitka Spruce green area rather than the amenities that we are developing' (LAG005).

The collective needs of the community were identified as opportunities for recreation, employment, better housing, and the availability of amenities from the woodland and their provision to the society.

The capability of the SI idea to deal with multiple European societal challenges (B1; 0.61 [0,1]) was estimated by the informants to be moderate to high. The indicator measures the capability of the SI initiative to simultaneously tackle multiple European societal challenges as identified in the Europe 2020 strategy (as seen at https://ec.europa.eu/programmes/horizon2020/en/h2020-section(s)ocietal-challenges, accessed on 12 December 2018). The higher the capability of the social innovation initiative to deal with multiple European societal challenges at the same time, the greater the likelihood that its impacts will spread out across different domains.

The perception of actors was that the SI initiative had only tackled European societal challenges in the territory in minor ways (B2; 0.39 [0,1]). The European societal challenges listed in the interview were: health; ageing of population; income, jobs, education; sustainable agriculture and food security; secure, clean and efficient energy; environment and climate change; inclusive societies; innovative societies; secure societies; and other. In this case study the "outcome" refers to the perception of innovators and project partners of the impact of process on "policy" issues. The low score of the indicator is due to the relative novelty of the SI idea and of its early stage of development. It seems unrealistic to expect a small community to rapidly provide transformative responses to major long-term challenges such as demography, food security, or health. Of the SI initiative's planned activities, some were already underway (e.g., timber harvesting, tree planting), some were under development (e.g., the housing project and cultural activities with children and involving the woodland), and others at the planning stage (e.g., construction of a heritage trail within the woodland). The impact of those activities on addressing the European challenges was beginning to be perceived or was still to come (e.g., tree planting would take time before making an important difference in the area). Respondents expressed hopes that the SI initiative would address some of those issues in the future (such as the age profile of the population of the community, and community well-being). Half of the informants mentioned that the SI was the only initiative able to satisfy the specific needs of the territory.

4.1.2. Reconfiguration of Social Practices

The woodland acquisition by the community has led to a reconfiguration of the governance arrangements in relation to its ownership and management. Such a reconfiguration was triggered mainly by societal challenges (e.g., a declining and ageing population, location in a remote area in the Highlands of Scotland with relatively poor accessibility). Supported by Highlands and Islands Enterprise, the community developed a five-year plan to sustain its development and to secure ownership of the woodland.

This support was in the context of institutional and regulatory rules-in-use that provided a basis for the reconfiguration of societal practices related the woodland. Changes in the institutional framework were significant factors in the capacity of LCDC to acquire the woodland. The Land Reform (Scotland) Acts (2003, 2016) and the Community Empowerment (Scotland) Act (2015) set out the legal framework for communities to access, acquire, and use public assets at a national level and across sectors. The National Forest Land Scheme (2005) and the Community Asset Transfer Scheme (2015) implemented by the Forestry Commission provided the regulatory instruments to transfer rights and responsibilities to communities. Within this legal and regulatory framework, Highlands and Islands Enterprise (HIE, the Scottish Government's economic and community development agency for the region) was able to support the requirements of the LCDC to take ownership and management rights over the woodland.

The members of the Lochcarron Community Development Company were active participants of this novel reconfiguration though its Board (n = 8) and membership (n = 108). As such, civil society has been fully engaged in this CF initiative. Due to these new governance arrangements, new social practices emerged such as community consultation about the future of the woodland and woodland management decisions, and the organisation of a community ballot (e.g., replanting, tree felling, a deer management plan, a heritage trail). The extent of this reconfiguration process was perceived by the local actors to be above the mid-point on a scale of 0 to 1 (A1; 0.54), on which the greater the number of changes perceived by the actors, the more the SI process can make a difference compared to the normal social practices used in the local context. This means that at the time of the interviews, not all of the planned changes had taken place.

According to the interviewees, the greatest changes were in terms of governance arrangements, followed by the creation of new relationships and personal attitudes, with a perception of a significantly greater number of activities taking place. Amongst social practices that were found to have been improved by the social actors were the establishment of new relationships, change in personal attitudes, and personal empowerment. We present the results related to changes in new relationships and new attitudes in this section while those relating to changes in governance are presented in Section 4.1.4 (outcomes on cohesion and well-being).

Those changes are summarised in Table 5 below.

The SI process promoted new networks of collaborative relationships including totally new collaborations as well as collaborations from pre-existing networks. As a result, the new network comprised a range of actors who were representative of the public and private sector, civil society, and social enterprises. The new network comprised public agencies that provided specific support in the application process to purchase the woodland such as the Scottish Land Fund, Highlands, and Islands Enterprise (HIE) and Forest Research (part of the Forestry Commission at the time of the application). It also included private sector actors such as a consultant for technical aspects relevant to compulsory aspects of the application process (namely conducting a woodland assessment and drafting a woodland management plan), which lie with that of local or in-house expertise. More generic advice and support was also provided by organisations that have been involved with LCDC in long-lasting collaborations and networks such as Scottish Natural Heritage (now NatureScot). Civil society was represented by people from the community who were interested in taking a more active role in the SI initiative or its projects.

Table 5. Summary of the main changes perceived by the case study actors.

Change Type	Most Common Changes
A new network	The new network comprises the agencies that provided support in the application process to purchase the woodland and their connection to the Lochcarron Community Development Company (LCDC). New relationships have arisen with the community as forestry operatives and a forest officer joined the LCDC (as employees of the company) to implement proposed activities within the woodland.
New governance arrangement	The new governance arrangement emerged at the time of the purchase of the woodland, when the LCDC became the owner of the woodland instead of the Forestry Commission. Management of the woodland was discussed with the Forestry Commission. Governance arrangements were said to be 'expected to change and to update constantly' (LAG010)
Changes in people's skills	'The Board has had to learn new skills, to upskill quite rapidly because they were suddenly given different tasks to undertake' (LAG010)
Changes observed in attitudes	'It was new project for the community, and it took us [the members of the board] a lot of work to bring the community together and get them on board. It took some time for them to trust us that we would deliver the changes we said we would deliver (the woodland acquisition process). At the beginning, there were a lot of attitudes entrenched'. (LAG010)
Changes observed in innovative mechanisms of network functioning	The network was said to have developed: - Flexibility; - The capability to embrace a new situation; - The capability to do things in a different way.
Changes observed in public actor's actions	The public actors appeared to become more flexible and to be listening more to the needs of the community. In that regard, the determination of the Community Development Officer was judged to be critical. Indeed, as highlighted by LAG010, 'LAG006 would not take 'No' for an answer, as a result the public institutions came to better understand what the needs of the community are'.

Based on the interviews conducted, new governance arrangements were developed through community consultation about the future of the woodland and woodland management decisions (e.g., replanting, tree feeling, deer management plan), and as a result of the establishment of new relationships and networks.

The perceived level of innovativeness in the SI process (A2; 0.44) is estimated as medium. This result is due to the opposing perceptions of the innovativeness of the SI process by the two informants who responded to this question. Clearly, in an ideal case, the innovativeness of the initiative would be evaluated by a larger number of respondents. The indicator attempts to measure the extent to which the SI network has been innovative in relation to: (i) reconfiguration of the network with respect to the situation before it started and (ii) the internal mechanisms of governance to run the SI process. The difference in estimates by the two key informants might be due to their different roles in the SI process. One of them was the Community Development Officer, who had interacted with different partners of the network on previous projects (so did not perceive the network

as new to the CF initiative). The other informant was a member of the Board, who considered the network and governance procedure to be new. Despite these differences in perceptions, the LCDC appears to be the first community in the area to have purchased local woodland and engaged in different satellite projects that run concurrently. The woodland previously belonged to the Forestry Commission and the community was not consulted about its management. Since the purchase of the woodland this has changed, with community members now involved in decision-making processes regarding its further use and management, in collaboration with the Forestry Commission.

According to the interviews, the core actors perceived the process for establishing the Lochcarron initiative as innovative and the capacity of the SI process to determine a reconfiguration of social practices in terms of: (i) New relationships established, (ii) change in personal attitudes, and (iii) personal empowerment as high. Interviewees highlighted that the creation of new relationships, changes in the actions of public actors, and changes in the attitudes of actors have been observed. LAG010 commented on the reconfiguration of social practices:

> 'The network started to exist and new relationships between organisations [built up]. Also, people's confidence increased'.

The SI promoted new attitudes in actors. In particular, network actors have been proactive from the outset of the SI process and throughout its development, as reflected in the processes of application and consultation. A shift in attitudes was noted amongst members of the Board of the LCDC. They bought into the initial initiative (LAG006 and LAG010) and became and felt moderately empowered about the process.

New attitudes were also noted from the community such as more openness of the community, raised awareness, more interest, and greater willingness to help and engage as reflected in the following quote:

> 'It was a new project for the community, and it took us [the members of the board] a lot of work to bring the community together and get them on board. It took some time for them to trust us that we would deliver the changes we said we would deliver (the woodland acquisition process). At the beginning, there were a lot of entrenched attitudes' (LAG010).

4.1.3. Engagement of Civil Society

The community was actively and voluntarily engaged in its own sustainable development, embracing values such as equity, fairness, well-being of the population, and support for biodiversity. The network was representative of public institutions, of civil society, social enterprises, civil society organisations, and private actors. Engagement of the community was reflected in the nature and content of the funding applications they have submitted (for European Union and national funding), as well as the type of programmes in which they are involved (Growth at the Edge Programme, LEADER). Public actors were represented by Highlands and Islands Enterprise, Scottish Natural Heritage (now NatureScot), and the Scottish Land Fund. Private sector actors include the Forest Development Officer who was hired as a consultant to conduct the management operations related to the woodland.

Members of civil society were keen to engage in the SI initiative (D1 = 1.00), and their participation in network meetings (D2 = 1.00). All respondents reported that their engagement in the SI was driven by 'serving a good cause' and gaining a sense of fulfilment. Those respondents intervened in the SI network either as individuals or as part of the community development company, which is a form of civil society organisation. The majority of the network members identified themselves as independent individuals. Their actions and involvement with regards to the SI initiative occurred within the framework of the LCDC, which represented both the legal entity and structure for the development of SI-related activities.

The amount of work that the planning, establishment, and operation of the SI initiative entailed contributed to its development and success. This was significant but difficult to

estimate accurately. The LCDC included a full-time Community Development Officer and three part-time forest operatives who ran projects with the community in the woodland. This amounted to 2.5 full-time employees on the project over a period of 18 months.

It is anticipated that the time involved is an underestimate of the actual time required. However, the contribution of Board members was more complicated to estimate as they intervened in a voluntary capacity and volunteers do not necessarily account for their time. One Board member mentioned being involved on a regular basis for an important period of time during the SI process: 'a few hours a week for 6 years' (LAG010). LAG010 was an active member of the Board of Directors during that time. It is likely that other members of the Board (10 at the time of the SI process) devoted an equivalent amount of time to the SI initiative. Having been a member of the Board for a number of years, this informant stepped down from the Board as their involvement was not sustainable from an economic point of view.

Civic engagement with community members is essential for the sustainability of SI. There was some evidence of 'fatigue' amongst the members of the Board during the interviews. They expressed the necessity for other members of the community to take over. Despite the strong social capital available, civic engagement in the community was recognised as a challenge as noted by one informant:

> 'Working with volunteers in an ageing community is difficult, and younger people are busy working. It is a chicken and egg situation. But the community is very supportive of us, shown on Saturday night when 4 groups came together' (LAG-005).

Procedures are in place to ensure that civic engagement is spread over a larger number of members of the community through regular renewal of membership of the Board and calls for volunteers to engage with the different activities led by the Lochcarron Community Development Company.

4.1.4. Outcomes on Social Well-Being

Outcomes on social well-being derive from the use of outputs by the direct beneficiaries (target population) of the project. They are behavioral changes, both intended and unintended such as those cited previously, positive and negative, that produce new routines, decisions, rules, and institutions. The SI project has approximately 180 direct beneficiaries who are the members of the Lochcarron Community Development Company.

The indicator that measures the perception of beneficiaries of changes in social cohesion inside and outside the territory was scored highly (C1; 0.81). The estimation has focused mainly on the effects inside the study area.

The discussion of the Focus Group referred to a number of new activities within the community that emerged. One of the forest operatives organised the rehabilitation of the forest, clearing, and planting of trees as well as the management of footpaths within the forest. This group was composed of adult volunteers from the community who found, through this activity, some benefits in terms of human health and well-being. Targeted activities with the children consisted of tree planting, an activity through which children would learn about native tree species. A second group, led by the second forest operative, targeted the socio-cultural aspects of the woodland and aimed to organise activities for people to learn more about the woodland and its history, and to learn craft skills in relation to the opportunities offered by the woodland (e.g., green wood carving and bushcraft courses). As a result, a heritage trail was created by which the community would learn about the history of the woodland and its biodiversity. Another example of a cultural activity is the re-enactment of part of the local history that related to the woodland by children from the primary school. In the process, the children learnt about archaeology, traditional songs, and to make up traditional costumes or outfits. All of those activities contributed to creating social cohesion and reconnection to the community with the woodland, an impact one member of the focus group noted as:

'The social innovation has had a strong impact on the sense of place and ownership' (LAG004).

The perceptions of actors of the improvements in governance aspects due to the SI initiative (C2) was measured in relation to:

(i) The improvement of the following positive aspects of governance (i.e., more options for citizens engagement, open consultation with stakeholders, voice given to minorities, good gender balance, good transparency, new policy initiatives);
(ii) A total of six negative aspects on governance (i.e., overwhelming bureaucracy, obsolete and rigid legal frameworks, brittle and inflexible public administrations, conflict of interests and corruption, poor quality of public services, and weakness of market and economy).

The improvement in governance refers to a reinforcement of positive aspects of governance and to a reduction in the negative ones, and was judged to be above average (C2 = 0.58). This highlighted that if some improvement had been noted (e.g., opportunities for citizens engagement, open consultation with stakeholders, and voice given to minorities), the SI initiative had little power of leverage over other aspects beyond the scope of the initiative and the remit of LCDC (e.g., bureaucracy, legal frameworks, and the quality of public services). In addition to the willingness to satisfy the needs of the territory and improve all aspects of governance, addressing those challenges is a requirement of the grant funding received by the SI actors. According to the Scottish Land Fund, CF implementers 'have to demonstrate the community adhesion to the project as well as the benefits for the community' (LAG003).

4.1.5. Perceived Innovativeness of the Implemented Initiative

The process of implementation of the SI initiative (e.g., woodland acquisition, network development) was perceived as having a low level of innovativeness, whereas overall the project has been perceived by the SI actors and beneficiaries involved as "above the mid-point in regard to innovativeness" (E1 = 0.63). The higher the internal validation of innovativeness of the SI initiative, the higher the likelihood it will produce innovative results. According to a key member of the core group:

'It [woodland acquisition by the community] has never been done here' (LAG006).

The newly established CF initiative aims to manage community land and associated assets for the benefit of the community and the public in general, and to advance the education of the community about environment, culture, and history, as well as advance the arts, heritage, culture, and science. The acquisition of the woodland, which was the focus of the SI initiative led by the community, was driven by the understanding that the woodland was an asset of the community that could be made available and provide amenities for future generations.

Experts who had insight to the processes both within and outside the territory estimated the external validation of the innovativeness of the SI initiative as being above average (E2 = 0.58), slightly lower than E1. One participant reported that 'Lochcarron is one good example of an innovative community in the Biosphere reserve' and that 'they have built their asset base and that is a really good result' (LAG002). The higher the perceived level of innovativeness of the SI initiative, the more it can offer as an example to other communities.

4.2. Impact of the Social Innovation Initiative on Tackling Problems of Rural Marginalisation

4.2.1. Impacts Across Domains

The reconfiguration of social practices as a result of the SI initiative seeks to enhance outcomes for societal well-being that translate into: (i) economic benefits (local employment and business opportunities); (ii) societal benefits (reduction of fuel poverty and increasing well-being through access to recreational woodland); (iii) environmental benefits (inclusion of a mix of broadleaved tree species within the existing pinewood plantation with the

view to increasing the biodiversity of the woodland); (iv) institutional/governance benefits (increased opportunities for citizen to participate in decisions that concern their own development and future). Our findings show that the SI was designed with the aim of improving the quality of life for local inhabitants, which in turn can support the local economy and the return to traditional forms of farming, livestock and traditional crafts.

The SI has generated a range of impacts across the environmental, economic, social and institutional/governance domains. The overall impact of the SI initiative across domains was judged to be moderate to high (F_actors = 0.71). The scoring of each of the different domains was above the mid-point of the scale (F_inst = 0.58), with the scoring of 3 indicators scoring above 0.70, as indicated in Figure 1 below.

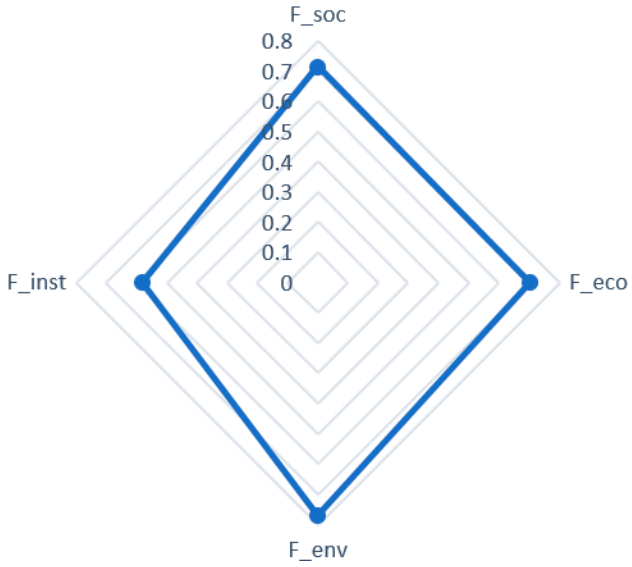

Figure 1. Impacts of the social innovation initiative across domains (economic, environmental, social and institutional).

The Focus Group stressed that the SI has considerable potential to address the needs identified in terms of local incomes, social cohesion and well-being, environment and barriers of public administration. The woodland project has created part time jobs, at the level of a few days a month, for the forest operatives and for the forest manager. The forest operatives' contracts lasted 187 months. These jobs are based upon the activities developed in the woodland. Our findings indicated that following implementation of the Social Innovation, new products and services are being provided for the community, the types of which reflect the multifunctional nature of the woodland. These products include: fuel wood for the community, timber, and a recreational area for children and the community as a whole.

> 'Firewood is available to the community. 100 customers regularly take firewood (for sale). There is a delivery once a week in a 15 miles radius of Lochcarron village. The timber is available in 3 m lengths or chopped bags (half ton). It is delivered, dropped off at the back door'(LAG006).

> 'Also funding in place to build a rustic shelter with composting toilet for schoolchildren, someone (sawmill owner) will donate the timber' (LAG006).

4.2.2. Scale, Effect of Impact and Effectiveness of the Social Innovation

The local actors who were engaged in the SI process believed they were able to make a difference through the SI initiative (G1 = 0.89). Their overall level of satisfaction with the results of the SI initiative was above average (G2 = 0.67).

The proportion of marginalisation problems improved by the SI initiative was perceived to be just above average (G3 = 0.59). The SI initiative is perceived to have marginally reduced the constraints due to physical geography, such as remoteness. Those constraints were perceived to be more systemic and linked to the physical environment. Other constraints mentioned were infrastructural issues and access limitations (defined as poor quality of roads, poor internet networks, and lack of business opportunities), and socio-economic conditions (defined here as small and ageing population, lack of employment opportunities, and youth out-migration). While the SI initiative could not address some issues (such as poor quality of the roads and poor internet networks), it is possible to create impacts on other infrastructural and socio-economic dimensions.

The impact of the SI initiative was judged to be higher inside the territory (G4 = 0.77 [0,1]) than outside the territory (G5 = 0.64). This is because the SI is a local process, triggered in response to local problems. It is also recognised that it is difficult for local actors to judge the impact of a local initiative beyond the local area and that an external perspective would be required to provide suitable evidence.

5. Discussion

The development of the SI initiative has opened access to a network of actors with expertise in financing community development initiatives and on-the-ground woodland management. This has created operational impacts, influencing its delivery on the ground and the willingness of the local community to test new ideas and initiatives, notably with the younger generation and community entrepreneurs. In the following, we reflect upon our research questions in light of the SI and CF literature. We also present policy recommendations and discuss the role of SI and CF in supporting the recovery of rural areas.

5.1. Impacts of Community Forestry as a Form of Social Innovation on the Social Dimension of Rural Communities and on Their Well-Being

Community forestry (CF) in Scotland embraces a diversity of configurations of actors, networks, and governance arrangements, and community woodlands are managed to achieve several objectives: commercial, recreational, and well-being. Our results demonstrate that if the technical management of the woodland needed to achieve some degree of financial sustainability, its acquisition was mainly motivated by the community's desire to obtain increased social benefits from the woodland. Those benefits belonged to three categories of impacts: processes, outputs, and outcomes (as described in) [19,28] that all contributed to improving the social dimension of the community, potentially leading to long-lasting change.

In terms of processes, the operation of the SI initiative contributed to building the capacity of local actors in developing technical and personal skills with regards to grant application and project management, environmental management and monitoring, reporting and interpreting characteristics of the woodland, communication, and community advocacy. The social learning underpinning the SI process resulted in outcomes such as increased connectivity and trust between local actors [2,50], and consequently developed the social capital of the community.

The reconfiguration process was underpinned by a narrative about community woodlands, the environment, and community empowerment that has been described and analysed in detail in Vercher et al., [21]. This narrative contributed to creating community cohesion around a common goal and bringing together efforts for it to be achieved. In terms of outputs, individuals were able to benefit from products and services such as fuel wood and the possibility of participating in recreational activities related to the woodland. Those translated further into outcomes such as reduced fuel poverty and increased well-being. These results are in line with some of the purposes and functions of community woodland groups [23] that seek to fulfil material needs but also aim to impact dimensions other than the purely economic. Next, beyond outcomes reported in the literature, the process of interacting with the woodland in diverse ways helped to reconnect the local actors to the history and the geography of the place and led them to develop a range of human

values (doing, belonging, and respecting) such as those described by Sarkki et al. [20] and contributed to an increased sense of place and ownership.

5.2. Types, Extents, and Scale of the Impacts of Socially Innovative CF in Marginalised Rural Areas

5.2.1. Impacts Across Domains

Impacts in the environmental domain relate to the regeneration of the biodiversity of the woodland. These impacts comprise increasing the quality of the woodland by replacing fallen trees with native species and improving the access to it for the benefit of the community. Our results are consistent with other studies on the impacts of community woodland [19] and the trend of community woodlands in the UK.

The next category of impacts considered is that of social impacts. Impacts related to social cohesion within the community, well-being, and health are reported in the literature on the impacts of community woodlands [19]. In addition to those impacts, our study also reports such impacts with regards to sense of place and ownership of the woodland. The cultural activities that have been implemented in the woodland have contributed to reviving the culture, history, and traditions associated with the woodland and community. Both children and adults have benefited from those activities. In particular, the children's re-enactment of aspects of local history has brought together the community, fostering and reinforcing its cohesion and connection to the place and environment. By engaging with the woodland through a diversity of activities, the community developed relational values as described in Sarkki et al. [20].

Impacts in the economic domain relate to employment creation and the amount of work (paid and unpaid) dedicated by the different community members to the SI. This type of data tends to be difficult to assess, in particular the amount of unpaid work devoted by volunteers. In the local context, the capacity of the SI to create those jobs—even though they were limited in time and subject to the provision of additional funding—was critical to generating impact. Indeed, funding the CDO post was fundamental to the emergence and development of the SI initiative. This role was essential in securing additional funding for the range of activities that were deployed in relation to the woodland and, in particular, in generating the three part-time jobs that sustained the delivery of the activities related to the woodland. Here we highlight the multiplier effects generated by the initial funding granted to the community and its importance in generating impact over the medium and long term as well as in increasing it in the short term. Without this initial, secure funding over a period that allowed the community to draft its initial plan and implement the first set of relevant activities, it would have been difficult or even impossible to reach the same level of impact. It would be interesting to further understand what the minimum amount of time and set of conditions (e.g., funding) are for a community-led initiative to be sustainable.

Finally, a focus on the governance and institutional domain revealed that the SI initiative generated positive impacts at the local scale of governance but had limited impact at higher scales of governance, beyond the remit of the community development company and the boundaries of the community. Avelino et al. [66] distinguish between different scales of change and argue that for SI to be transformative, it needs to 'challenge, alter, or replace dominant institutions in the social context' [67]. Our results indicate that despite the community having more opportunity to contribute and successfully engage in local-level decision making, the functioning of higher-level institutions seems to have remained unaltered and no change or relatively little change occurred at the system level. This finding is in line with criticisms of SI as a 'panacea', with higher-level territorial actors still being able to evade their responsibilities for addressing systemic territorial challenges.

5.2.2. Scale and Extent of Impacts

Our results highlight that the impact of the SI initiative is mostly local and close to the local actors both physically, structurally, and in terms of scale of governance. This aligns with results obtained in different European countries [7].

Next, we discuss the scale and extent of impacts in relation to spatial scale, temporal scale, and scale of governance.

In terms of environmental impact, the improvement in the quality of the woodland was a type of impact that had started to be felt by the community (i.e., an immediate improvement in the quality of the woodland's benefits due to increased access for the local community). This impact also had a cumulative effect that would increase over time, as trees grow and the resulting mix of species transform the woodland ecosystem into a more pleasant environment for the local community and a more favourable ecosystem that is able to provide habitats for a wide range of species. This temporal dimension has also been highlighted in the previous section on economic impacts when discussing multiplier effects that are likely to increase over time and as the initiative develops.

The SI initiative has had more impacts within, than outside, the territory. This could be due to the goal and nature of the initiative that aimed to answer unmet local needs. The local actors did not necessarily have interests in producing impacts beyond the boundaries of their localities. Furthermore, local stakeholders did not necessarily have the means to create impact beyond the local level. As the results have shown, the resources available to the community to develop their initiative were limited (staff and volunteer time, skills, and network) and prioritised to meet local needs. Those results are in line with the current literature [7]. That being said, it was too early to assess some of the impacts in the environmental dimension such as, for example, the potential impact of increased diversity of the woodland on creating ecological corridors enabling animal species migration at the landscape level. This limitation is common in evaluation approaches and calls for the repetition of the evaluation at several points in time to gather longitudinal data and to account for the dependence between time and the other scales of impact assessment [19].

5.3. Policy Recommendations for Social Innovation in Rural Areas

This study presents a successful example of SI in the context of CF in which the community has been positively impacted upon by the SI and other impacts are still to unfold over time. However, the woodland acquisition process has not been a straightforward journey for the community. Nor has it been completed at little cost. While policy and institutional support, combined with strong civil society engagement, are usually needed to drive social innovations and impact on accustomed practices [24,50], in this section, we would propose recommendations for policy that aims to sustain the emergence and development of SI in rural areas.

The LCDC case study demonstrated something that has long been understood by participants in community initiatives, that is, while community volunteers are essential drivers of social innovations at the early stages, they lack the resources or energy to continue indefinitely. Thus, in the case of the LCDC, while the seed for the idea of a CF-based local development initiative came from a group of volunteers, the survival and continuity of the initiative was only assured once funding for the salary of the Community Development Officer had been secured.

The first, and most important policy recommendation is for mechanisms that enable the rapid provision of support of the salary of a full-time employee dedicated to each initiative. This is likely to be cheaper than supporting large, centrally-funded development programmes. Such larger programmes are also likely to favour larger bodies with the appropriate managerial structures, over small community groups.

A second recommendation is to address the significant deficiency in local governance. Approaches could be to grant the authority for managing stronger policy instruments to lower and more local levels of governance, such as community councils or area partnerships, with staff dedicated to capacity building and providing support for community initiatives. Where local-scale governance is weak, wider use could be made of these bridging organisations. However, this becomes feasible and easier to realise in practice if institutional reforms are introduced at the most appropriate level (e.g., locally or regionally, following a principle of vertical subsidiarity), and institutions with the legal status to accept

funds can be established rapidly. In some cases, they cannot access facilities or resources provided by national governments, or the EU, because they do not have the status of 'rural enterprises' or 'businesses'. There is a lack of organisation with a suitable legal status. In this study, the LCDC emerged to replace and account for this weakness, a phenomenon observed in different contexts across the UK [10].

Thirdly, policy measures and associated processes can have a decisive impact on the well-being of communities due to public policy being, often, a significant driver of change in rural areas [26]. Yet, a complaint often made regarding the European Union-led LEADER rural development programme is that the procedures for obtaining funding for community projects are too onerous. Development funding applications could be simplified significantly, with institutions such as the previously mentioned area partnerships providing the types of information required by the funding body to accompany the application prepared by the local community. The process could be further assisted through a shift from a focus on businesses to a focus on civil society-based organisations being eligible to apply for funds and resources. If the LCDC case is an example of a focus on a civil-society-based organisation, the shift yet has to be operated in other European countries (e.g., Spain, Italy).

Finally, the LCDC case has revealed the importance of the types of resources (volunteer resources, human and social capital, requirement for economic viability, information, and capacity to search for information) necessary for the SI initiative to be taken through to completion, and its maintenance on the long term. Those resources are key factors in determining the success or failure of SI as demonstrated by Kluvankova et al. [38]. However, different communities have different levels of human capital, so funding should be enclosed to ensure that less well-equipped communities are not disadvantaged (see also [68]). From a research and evaluation point of view, unpacking the relationships between SI and social and human capital and focusing on indicators aimed to capture those types of impacts will help answer policy needs and fill a gap in current evaluations of policies targeting rural development such as, for example, the LEADER program [57].

5.4. Potential for Social Innovation and Community Forestry for the Recovery of Rural Areas after the COVID-19 Crisis

Rural areas are vulnerable to shocks as they tend to have fewer resources, less access to social services, an older population profile, and be affected by marginalisation [4,69–71]. They tend to be heavily reliant on industries that have been affected by the COVID-19 pandemic such as recreation and tourism. As a result, the Covid-19 crisis has had negative impacts on employment, overall life satisfaction, mental health, and economic outlook across sex, age, ethnicity, and education [69].

Hepburn et al. [72] discuss the benefits of directing 'investment towards a productive and balanced portfolio of sustainable physical capital, human capital, social capital, intangible capital, and natural capital assets'. In Scotland, the Report of the Advisory Group on Economic Recovery [17] made policy recommendations to invest in Scotland's natural capital, supporting the design and implementation of carbon positive businesses and multi-functional land use. Our findings in Lochcarron show how social innovation can provide investment in these capitals and that encouraging multi-functional use of the community woodland can create positive impacts. As such, encouraging SI in CF could provide one element in a recovery strategy from COVID-19 and form part of an accelerated approach to wider reforms of support for empowering communities.

During the constraints on movement as a result of the COVID-related lockdowns, the importance of human contact with nature for health and well-being appear to have increased fostering 'Nurture and Recreation' as well as 'Inspiration and Nourishment' values [73]. Woodlands offer considerable potential for green care-based initiatives (e.g., forest bathing and forest therapy), adding to the multiple benefits already identified above.

A consequence of COVID-19 could be greater connectivity between local people and their community woodlands, including people who were not initially supportive of the initiative, thus improving the prospects of positive impacts over the longer term.

6. Conclusions

This paper explored key themes linking social innovation with community forestry, and provided a detailed assessment of the impacts of a particular community forestry social innovation initiative in the Highlands of Scotland. We assessed the process of reconfiguration of the ownership and management of Kirkton woodland, which led to the acquisition of the provision of new products and services. The community acquired a previously state-owned forest, which it planned to manage to obtain benefits for improved human health and well-being and other ecosystems services (the innovative idea). This led to an innovative process of reconfiguring the network, governance arrangements, and attitudes within members of the community organisation and the wider community (Lochcarron Community Development Company from 2015 onwards).

Positive impacts were created around the revitalisation of a rural area and the empowerment of the local community. Within the governance structures of the social innovation, members of the community now discuss project ideas, identify opportunities for grants, and apply for funding. The wider community is involved in the processes of decision-making regarding the future use of the woodland through processes of community consultations. Since the acquisition of the woodland, the community has established new connections with a wider network of organisations involved in woodland management and community development. They contract experts and expert knowledge to address technical issues for which there is not the relevant human capital within the community.

The positive impacts of this social innovation are evident by the active management of the woodland to achieve a range of different objectives, and the provision of new products and services to the community. Those services include wood fuel and timber for local households and a recreational area for children and the wider community. Those positive impacts continue with new initiatives such as the creation of a heritage trail within the woodland and a scoping study for housing on some of the woodland plots. Collectively, these provide evidence of increased local social capital, leading to strategic, operational, and instrumental impacts of social innovation. In view of the recent pandemic, social innovation in community forestry could provide one element in a recovery strategy from COVID-19. Policy recommendations include providing adequate financial support, capacity building, and partnership building to sustain social innovation initiatives over the medium to long term.

Author Contributions: Conceptualisation, C.B., M.M., L.S.; methodology, C.B., M.M., L.S., E.P.; formal analysis, C.B., M.M.; investigation C.B., R.J.H.; data curation, C.B., M.M., R.J.H.; writing—original draft preparation, C.B., M.M.; writing—review and editing, D.M., R.J.H., L.S., E.P., M.N.; project administration and acquisition, D.M. and M.N. All authors have read and agreed to the published version of the manuscript.

Funding: This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 677622 (H2020 SIMRA–Social Innovation in Marginalised Rural Areas–Project). It was also partly funded by the Rural & Environment Science & Analytical Services Division of the Scottish Government through its Strategic Research Programme (2016–2021). The views expressed in this article are the sole responsibility of the authors and do not necessarily reflect the views of the European Union or the Scottish Government.

Institutional Review Board Statement: The information regarding the SI initiative was collected and analysed within the framework of Horizon 2020 project SIMRA. Data collection and research design complied with the legal guidelines on research ethics as required under rules for receiving EU H2020 funding (Regulation (EU) 1291/2013, 11 December 2013), and the internal arrangements of individual project partners. The ethical clearance procedure is described in SIMRA Deliverable 5.1 (http://www.simra-h2020.eu/wp-content/uploads/2018/06/SIMRA-D5.1_Case-Study-Protocols-and-Final-Synthetic-Description-for-Each-Case-Study-1-1.pdf, accessed on 12 May 2018).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data that support the findings of this study are available on request from the corresponding author (E.R.) starting from 2023. The data are not publicly available due to conditions associated with their collection (e.g., could compromise the privacy of research participants), in line with ethical clearance obtained. Further details of the case studies are available on the SIMRA project www site,www.simra-h2020.eu/index.php/simra-case-studies, accessed 19 September 2019.

Acknowledgments: We wish to thank to all our interview partners in the case study for sharing their experience and knowledge and welcoming us to their community. Furthermore, we thank the anonymous reviewers for their valuable feedback. We also wish to thank Bill Slee for his support and insights at the data collection stage, David Kerschbaum for his insights into the social capital dimension of the case study and EUROMONTANA for enabling the open access of this publication.

Conflicts of Interest: The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

Appendix A

Table A1. Value of indicators reflecting the social innovation dimensions and impact of the social innovation and its extent.

Indicators, Reflecting the Social Innovation Dimensions.		Value	Indicators, Reflecting Impact of the Social Innovation and its Extent		Value
Reconfiguration of societal practices	A1	0.54	**Domains of Impact**	F_actors	0.71
	A2	0.44		F_soc	0.77
Response to societal challenges	B1	0.61		F_eco	0.70
	B2	0.39		F_env	0.72
Outcomes on social wellbeing	C1	0.81		F_ins	0.58
	C2	0.30		G1	0.67
Engagement of civil society	D1	1.00	**Scale and effect of Impact**	G2	0.77
	D2	1.00		G3	0.64
Perceived innovativeness	E1	0.63		G4	0.89
	E2	0.58			

References

1. Bureau of European Policy Advisors. Challenge Social Innovation. In *Challenge Social Innovation: Potentials for Business, Social Entrepreneurship, Welfare and Civil Society*; Hans-Werner, F., Hochgerner, J., Eds.; Springer: Berlin/Heidelberg, Germany, 2012.
2. Moulaert, F. *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*; Edward Elgar Publishing: Cheltenham, UK; Northampton, MA, USA, 2013.
3. Živojinović, I.; Ludvig, A.; Hogl, K. Social Innovation to Sustain Rural Communities: Overcoming Institutional Challenges in Serbia. *Sustainability* **2019**, *11*, 7248. [CrossRef]
4. SIMRA. *Social Innovation in Marginalised Rural Areas*; Innovative, Sustainable and Inclusive Bioeconomy, Topic ISIB-03-2015. Unlocking the Growth Potential of Rural Areas through Enhanced Governance and Social Innovation, European Union Framework Programme Horizon 2020: European Commission, DG Research and Innovation; European Commission: Brussels, Belgium, 2016; Available online: https://cordis.europa.eu/project/id/677622 (accessed on 2 March 2021).
5. Nijnik, M.; Secco, L.; Miller, D.; Melnykovych, M. Can Social Innovation Make a Difference to Forest-Dependent Communities? *Forest Policy Econ.* **2019**, *100*, 207–213. [CrossRef]
6. European Commission. *Mission Letter to Dubravka Šuica, European Commission Vice-President for Demography and Democracy*; European Commission: Brussels, Belgium, 2019.
7. Ravazzoli, E.; Dalla Torre, C.; Da Re, R.; Marini Govigli, V.; Secco, L.; Górriz-Mifsud, E.; Pisani, E.; Barlagne, C.; Baselice, A.; Bengoumi, M.; et al. Can Social Innovation Make a Change in European and Mediterranean Marginalized Areas? Social Innovation Impact Assessment in Agriculture, Fisheries, Forestry, and Rural Development. *Sustainability* **2021**, *13*, 1823. [CrossRef]
8. Bosworth, G.; Price, L.; Hakulinen, V.; Marango, S. Rural Social Innovation and Neo-endogenous Rural Development. In *Neoendogenous Development in European Rural Areas*; Cejudo, E., Navarro, F., Eds.; Springer Geography: Cham, Switzerland, 2020; pp. 21–32.
9. Polman, N.B.P.; Slee, B.; Kluvánková, T.; Dijkshoorn-Dekker, M.W.C.; Nijnik, M.; Gežík, V.; Soma, K. Classification of Social Innovations for Marginalized Rural Areas; H2020-Simra Deliverable 2.1. 2017. Wageningen University, Wageningen, The Netherlands. Available online: http://www.simra-h2020.eu/wp-content/uploads/2017/09/D2.1-Classification-of-SI-for-MRAs-in-the-target-region.pdf (accessed on 2 March 2021).
10. Revell, P.; Dinnie, E. Community resilience and narratives of community empowerment in Scotland. *Community Dev. J.* **2018**, *55*, 218–236. [CrossRef]

11. Seyfang, G.; Haxeltine, A. Growing Grassroots Innovations: Exploring the Role of Community-Based Initiatives in Governing Sustainable Energy Transitions. *Environ. Plan. C Gov. Policy* **2012**, *30*, 381–400. [CrossRef]
12. Navarro, F.A.; Woods, M.; Cejudo, E. The LEADER Initiative has been a Victim of Its Own Success. The Decline of the Bottom-Up Approach in Rural Development Programmes. The Cases of Wales and Andalusia. *Sociol. Rural.* **2015**, *56*, 270–288. [CrossRef]
13. Fischer, A.; McKee, A. A question of capacities? Community resilience and empowerment between assets, abilities and relationships. *J. Rural. Stud.* **2017**, *54*, 187–197. [CrossRef]
14. Lawrence, A.; Anglezarke, B.; Frost, B.; Nolan, P.; Owen, R. What does community forestry mean in a devolved Great Britain? *Int. For. Rev.* **2009**, *11*, 281–297. [CrossRef]
15. Ambrose-Oji, B.; Lawrence, A.; Stewart, A. Community based forest enterprises in Britain: Two organising typologies. *For. Policy Econ.* **2015**, *58*, 65–74. [CrossRef]
16. Charnley, S.; Poe, M.R. Community Forestry in Theory and Practice: Where Are We Now? *Annu. Rev. Anthr.* **2007**, *36*, 301–336. [CrossRef]
17. Scottish Government. *Towards a Robust, Resilient Wellbeing Economy for Scotland, Report of the Advisory Group on Economic Recovery*; Scottish Government: Edinburgh, UK, 2020.
18. Bowler, D.E.; Buyung-Ali, L.M.; Healey, J.R.; Jones, J.P.; Knight, T.M.; Pullin, A.S. Does community forest management provide global environmental benefits and improve local welfare? *Front. Ecol. Environ.* **2012**, *10*, 29–36. [CrossRef]
19. Lawrence, A.; Ambrose-Oji, B. Beauty, friends, power, money: Navigating the impacts of community woodlands. *Geogr. J.* **2015**, *181*, 268–279. [CrossRef]
20. Sarkki, S.; Parpan, T.; Melnykovych, M.; Zahvoyska, L.; Derbal, J.; Voloshyna, N.; Nijnik, M. Beyond participation! Social innovations facilitating movement from authoritative state to participatory forest governance in Ukraine. *Landsc. Ecol.* **2019**, *34*, 1601–1618. [CrossRef]
21. Vercher, N.; Barlagne, C.; Hewitt, R.; Nijnik, M.; Esparcia, J. Whose Narrative is it Anyway? Narratives of Social Innovation in Rural Areas—A Comparative Analysis of Community-Led Initiatives in Scotland and Spain. *Sociol. Rural.* **2021**, *61*, 163–189. [CrossRef]
22. Nijnik, M.; Kluvánková, T.; Nijnik, A.; Kopiy, S.; Melnykovych, M.; Sarkki, S.; Barlagne, C.; Brnkaláková, S.; Kopiy, L.; Fizyk, I.; et al. Is There a Scope for Social Innovation in Ukrainian Forestry? *Sustainability* **2020**, *12*, 9674. [CrossRef]
23. Lawrence, A.; Wong, J.L.; Molteno, S. Fostering social enterprise in woodlands: Challenges for partnerships supporting social innovation. *For. Policy Econ.* **2020**, *118*, 102221. [CrossRef]
24. Ludvig, A.; Weiss, G.; Sarkki, S.; Nijnik, M.; Živojinović, I. Mapping European and forest related policies supporting social innovation for rural settings. *For. Policy Econ.* **2018**, *97*, 146–152. [CrossRef]
25. Rogelja, T.; Ludvig, A.; Weiss, G.; Secco, L. Implications of policy framework conditions for the development of forestry-based social innovation initiatives in Slovenia. *For. Policy Econ.* **2018**, *95*, 147–155. [CrossRef]
26. Lukesch, R.; Ludvig, A.; Slee, B.; Weiss, G.; Živojinović, I. Social Innovation, Societal Change, and the Role of Policies. *Sustainability* **2020**, *12*, 7407. [CrossRef]
27. Barlagne, C.; Melnykovych, M.; Hewitt, R.; Kerschbaum, D.; Miller, D.; Nijnik, M. *Analytical Case Studies (Type a Case Study) Lochcarron Community Development Company—Strathcarron, Scotland, UK*; Internal Project Report 5.4j—Social Innovation in Marginalised Rural Areas (Simra); The James Hutton Institute: Aberdeen, UK, 2019.
28. Secco, L.; Pisani, E.; Burlando, C.; Da Re, R.; Gatto, P.; Pettenella, D.; Vassilopoulus, A.; Akinsete, E.; Koundouri, P.; Lopolito, A. *Deliverable D4.2, Set of Methods to Assess Si Implications at Different Levels: Instructions for Wps 5&6. Social Innovation in Marginalised Rural Areas Project (Simra), Demonstrator Submitted to the European Commission*; SIMRA: Brussel, Belgium, 2017; p. 203.
29. Secco, L.; Pisani, E.R.; Da Re, K.; Vicentini, T.; Rogelja, C.; Burlando, A.; Ludvig, G.; Weiss, I.; Zivojinovic, E.; Górriz-Mifsud, V.; et al. *Deliverable D4.3, Manual on Innovative Methods to Assess Si and Its Impacts. Social Innovation in Marginalised Rural Areas Project (Simra), Report to the European Commission*; The European Commission: Brussels, Belgium, 2019.
30. McKee, A. Legitimising the Laird? Communicative Action and the role of private landowner and community engagement in rural sustainability. *J. Rural. Stud.* **2015**, *41*, 23–36. [CrossRef]
31. Beckinsale, E. *Community Forestry in Scotland: Decentralisation, Power and Empowerment*; MSc: Edinburgh, UK, 2011.
32. Bizikova, L.; Nijnik, M.; Kluvánková-Oravská, T. Sustaining Multifunctional Forestry Through the Developing of Social Capital and Promoting Participation: A Case of Multiethnic Mountain Communities. *Small-Scale For.* **2011**, *11*, 301–319. [CrossRef]
33. Kluvánková, T.; Gežík, V. Survival of commons? Institutions for robust forest social—Ecological systems. *J. For. Econ.* **2016**, *24*, 175–185. [CrossRef]
34. The Scottish Government. *Scotland's Forestry Strategy 2019–2029*; The Scottish Government: Edinburgh, UK, 2019.
35. Melnykovych, M.; Nijnik, M.; Soloviy, I.; Nijnik, A.; Sarkki, S.; Bihun, Y. Social-ecological innovation in remote mountain areas: Adaptive responses of forest-dependent communities to the challenges of a changing world. *Sci. Total Environ.* **2018**, *613-614*, 894–906. [CrossRef] [PubMed]
36. Nijnik, M.; Sarkki, S. Social Innovation for Revitalising Forest-Dependent Communities. *Chart. For. Winter* **2019**, *2018/2019*, 18–19.
37. Secco, L.; Pisani, E.; Da Re, R.; Rogelja, T.; Burlando, C.; Vicentini, K.; Pettenella, D.; Masiero, M.; Miller, D.; Nijnjk, M. Towards a method of evaluating social innovation in forest-dependent rural communities: First suggestions from a science-stakeholder collaboration. *For. Policy Econ.* **2019**, *104*, 9–22. [CrossRef]

38. Kluvankova, T.; Nijnik, M.; Spacek, M.; Sarkki, S.; Perlik, M.; Lukesch, R.; Melnykovych, M.; Valero, D.; Brnkalakova, S. Social Innovation for Sustainability Transformation and its Diverging Development Paths in Marginalised Rural Areas. *Sociol. Rural.* **2021**. [CrossRef]
39. Neumeier, S. Why do Social Innovations in Rural Development Matter and Should They be Considered More Seriously in Rural Development Research?—Proposal for a Stronger Focus on Social Innovations in Rural Development Research. *Sociol. Rural.* **2011**, *52*, 48–69. [CrossRef]
40. Maccallum, D.; Haddock, S.V. *Social Innovation and Territorial Development*; Ashgate Publishing, Ltd.: Farnham, UK, 2016.
41. Ravazzoli, E.; Valero, D.E. Social Innovation: An Instrument to Achieve the Sustainable Development of Communities. In *Sustainable Cities and Communities*; Filho, W.L., Azul, A.M., Brandli, L., Özuyar, P.G., Wall, T., Eds.; Springer International Publishing: Cham, Switzerland, 2019.
42. Sarkki, S.; Torre, C.D.; Fransala, J.; Živojinović, I.; Ludvig, A.; Górriz-Mifsud, E.; Melnykovych, M.; Sfeir, P.R.; Arbia, L.; Bengoumi, M.; et al. Reconstructive Social Innovation Cycles in Women-Led Initiatives in Rural Areas. *Sustainability* **2021**, *13*, 1231. [CrossRef]
43. Mifsud, E.G.; Melnykovych, M.; Govigli, V.M.; Alkhaled, S.; Arnesen, T.; Barlagne, C.; Bjerck, M.; Burlando, C.; Jack, S.; Blanco, C.R.F. *Report on Lessons Learned from Innovation Actions in Marginalised Rural Areas*; European Forest Institute: Barcelona, Spain, 2019; Available online: http://www.simra-h2020.eu/wp-content/uploads/2019/12/D7.3_Lessons-Learnt-from-Innovation-Actions-in-Marginalised-Rural-Areas_compressed.pdf (accessed on 2 March 2021).
44. Govigli, V.M.; Alkhaled, S.; Arnesen, T.; Barlagne, C.; Bjerck, M.; Burlando, C.; Melnykovych, M.; Fernandez-Blanco, C.R.; Sfeir, P.; Górriz-Mifsud, E. Testing a Framework to Co-Construct Social Innovation Actions: Insights from Seven Marginalized Rural Areas. *Sustainability* **2020**, *12*, 1441. [CrossRef]
45. Barlagne, C.; Marini Govigli, V.; Nijnik, M.; Miller, D. Beyond Interactive Innovation: The Potential of Social Innovation in Reshaping Innovation Processes in Agriculture and Forestry. Manuscript in preparation.
46. Kluvánková, T.; Brnkaľáková, S.; Špaček, M.; Slee, B.; Nijnik, M.; Valero, D.; Miller, D.; Bryce, R.; Kozová, M.; Polman, N.; et al. Understanding Social Innovation for the Well-Being of Forest-Dependent Communities: A Preliminary Theoretical Framework. *For. Policy Econ.* **2018**, *97*, 163–174. [CrossRef]
47. Barlagne, C.; Bézard, M.; Drillet, E.; Larade, A.; Diman, J.L.; Alexandre, G.; Vinglassalon, A.; Nijnik, M. Stakeholders Engagement Platform to Identify Sustainable Pathways for the Development of Multi-Functional Agroforestry in Guadeloupe, French West Indies. *Agroforestry Systems*. (Accepted).
48. Cajaiba-Santana, G. Social innovation: Moving the field forward. A conceptual framework. *Technol. Forecast. Soc. Chang.* **2014**, *82*, 42–51. [CrossRef]
49. Baker, S.; Mehmood, A. Social innovation and the governance of sustainable places. *Local Environ.* **2013**, *20*, 321–334. [CrossRef]
50. Bock, B.B. Rural Marginalisation and the Role of Social Innovation; A Turn Towards Nexogenous Development and Rural Reconnection. *Sociol. Rural.* **2016**, *56*, 552–573. [CrossRef]
51. Neumeier, S. Social innovation in rural development: Identifying the key factors of success. *Geogr. J.* **2017**, *183*, 34–46. [CrossRef]
52. Bureau of European Policy Advisors. *Social Innovation: A. Decade of Changes*; Bureau of European Policy Advisors: Brussel, Belgium, 2010.
53. Valero, D.; Bryce, R. *Catalogue of Diversity of Social Innovation (Version 1.0)*; SIMRA: Perth, Australia, 2020.
54. Sarkki, S.; Ficko, A.; Miller, D.; Barlagne, C.; Melnykovych, M.; Jokinen, M.; Soloviy, I.; Nijnik, M. Human values as catalysts and consequences of social innovations. *For. Policy Econ.* **2019**, *104*, 33–44. [CrossRef]
55. OECD. Improving Evaluation Practices: Best Practice Guidelines for Evaluation and Background Paper. 1999. Available online: http//:www.oecd.org/puma/ (accessed on 16 September 2020).
56. OECD. *Glossary of Key Terms in Evaluation and Results Based Management*; DAC Working Party on Aid Evaluation of the OECD: Paris, France, 2010.
57. Dwyer, J.; Bradley, D.; Hill, B. Towards an Enhanced Evaluation of European Rural Development Policy: Reflections on Uk Experience. *Econ. Rurale* **2008**, 53–79. [CrossRef]
58. Pisani, E.; Franceschetti, G.; Secco, L.; Christoforou, A. *2017 Social Capital and Local Development: From Theory to Empirics*; Springer: Berlin/Heidelberg, Germany, 2017.
59. Ramos, T.B. Sustainability Assessment: Exploring the Frontiers and Paradigms of Indicator Approaches. *Sustainability* **2019**, *11*, 824. [CrossRef]
60. Yin, R.K. *2017 Case Study Research and Applications: Design and Methods*; SAGE Publications: Thousand Oaks, CA, USA, 2017.
61. Secco, L.; Pisani, E.R.; Da Re, K.; Vicentini, T.; Rogelja, C.; Burlando, A.; Ludvig, G.; Weiss, I.; Zivojinovic, E.; Górriz-Mifsud, V.; et al. Evaluation Manual. Innovative Methods to Assess Social Innovation and Its Impacts in Marginalised Rural Areas. Simra Project. The European Union: Brussel, Belgium, 2020.
62. Etikan, I.; Musa, S.A.; Alkassim, R.S. Comparison of Convenience Sampling and Purposive Sampling. *Am. J. Theor. Appl. Stat.* **2016**, *5*, 1–6. [CrossRef]
63. Torre, C.D.; Ravazzoli, E.; Dijkshoorn-Dekker, M.; Polman, N.; Melnykovych, M.; Pisani, E.; Gori, F.; Da Re, R.; Vicentini, K.; Secco, L. The Role of Agency in the Emergence and Development of Social Innovations in Rural Areas. Analysis of Two Cases of Social Farming in Italy and The Netherlands. *Sustainability* **2020**, *12*, 4440. [CrossRef]
64. QSR International. *Nvivo Qualitative Data Analysis Software*; Version 12; QSR International: Doncaster, Australia, 2018.

65. Marini Govigli, V.M.; Melnykovych, E.; Górriz-Mifsud, C.; Dalla Torre, E.; Ravazzoli, R.; Da Re, E.; Pisani, L.; Secco, K.; Vincentini, A.; Ludvig, G.; et al. Report on Social Innovation Assessment in Each Selected Case Study, Deliverable D5.3. In *Social Innovation in Marginalised Rural Areas (SIMRA)*; SIMRA: Brussel, Belgium, 2019.
66. Avelino, F.; Wittmayer, J.M.; Pel, B.; Weaver, P.; Dumitru, A.; Haxeltine, A.; Kemp, R.; Jørgensen, M.S.; Bauler, T.; Ruijsink, S.; et al. Transformative social innovation and (dis)empowerment. *Technol. Forecast. Soc. Chang.* **2019**, *145*, 195–206. [CrossRef]
67. Pel, B.; Haxeltine, A.; Avelino, F.; Dumitru, A.; Kemp, R.; Bauler, T.; Kunze, I.; Dorland, J.; Wittmayer, J.; Jørgensen, M.S. Towards a Theory of Transformative Social Innovation: A Relational Framework and 12 Propositions. *Res. Policy* **2020**, *49*, 104080. [CrossRef]
68. Slee, B.; Mosdale, L. How Policy Can Help Bring About Social Innovation in Rural Areas. In *Policy Brief*; document produced within the framework of the H2020 funded SIMRA project; SIMRA: Brussel, Belgium, 2020.
69. Mueller, J.T.; McConnell, K.; Burow, P.B.; Pofahl, K.; Merdjanoff, A.A.; Farrell, J. Impacts of the COVID-19 pandemic on rural America. *Proc. Natl. Acad. Sci.USA* **2021**, *118*, 2019378118. [CrossRef]
70. Henning-Smith, C. The Unique Impact of COVID-19 on Older Adults in Rural Areas. *J. Aging Soc. Policy* **2020**, *32*, 396–402. [CrossRef] [PubMed]
71. Price, M.; Miller, D.; McKeen, M.; Slee, B.; Nijnik, M. *Report D3.1. Categorisation of Marginalised Rural Areas (Mras)*; Social Innovation in Marginalised Rural Areas Project (Simra); Perth College: Perth, UK, 2017; p. 57.
72. Hepburn, C.; O'Callaghan, B.; Stern, N.; Stiglitz, J.; Zenghelis, D. Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change? *Oxf. Rev. Econ. Policy* **2020**, *36*, S359–S381. [CrossRef]
73. Morse, J.W.; Gladkikh, T.M.; Hackenburg, D.M.; Gould, R.K. COVID-19 and human-nature relationships: Vermonters' activities in nature and associated nonmaterial values during the pandemic. *PLoS ONE* **2020**, *15*, e0243697. [CrossRef] [PubMed]