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Governance Capacity of Public Actors for Forest-Based Social Innovation

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La Capacità di Governance degli Attori Pubblici per una Innovazione Sociale in Ambito Forestale

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To Luna

Where there's a will there's a way.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

AD	Archive Document
AP	Action Plan
CAF	Chamber of Agriculture and Forestry
CLLD	Community-Led Local Development
DCI	Decree on The Measure for Capital Investments
DG	Directorate General
E	Expert
EC	European Commission
EFI	European Forest Institute
EI	Economic Instruments
ESA	Event-Sequence Analysis
EU	European Union
FA	Forest Act
FPGE	Framework Program for the Transition to the Green Economy
GC	Governance Capacity
H	Hypothesis
ID	Identification Number
II	Informational Instruments
KII	Key Informant Interviews
LC	Local community
LFMU	Local Forest Management Unit
LSE	Law on Social Entrepreneurship
MOSE	Monitoring of The Operation of Social Enterprises
Mr.	Mister
Ms.	Miss
MSFA	Management of State Forests Act
NI	Networking Instruments
No	Number
OP	Operational Programme
OPNFP	Operational program for the Implementation of the National Forest Programme
PMSE	Program of Measures of the Strategy for the Development of Social Enterprise

PNCH	Preservation of Natural and Cultural Heritage
PS	Primary School
PSU	Primary School Unit
RDP	Rural Development Programme
RI	Regulatory Instruments
RNFP	Resolution on National Forest Programme
RS	Republic of Slovenia
RQ	Research Question
S	Statement
SC	Sports Club
SDS	Slovenia's Development Strategy
SDSE	Strategy for The Development of Social Entrepreneurship
SE	Social Enterprise
SFCCA	Strategic Framework for Climate Change Adaptation
SFS CU	State Forest Service, Central Unit
SFS LU	State Forest Service Local Unit
SFS RU	State Forest Service Regional Unit
SI	Social Innovation
Slo.	Slovenian
SO	Specific Objective
SSI	Semi-Structured Interviews
SWOT	Strengths, Weaknesses, Opportunities, Treats
WWII	the Second World War

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SUMMARY

As forests provide multiple goods and services (e.g. wood, carbon sequestration, tourism, etc.) forestry is one of the sectors with very high potentials for eco-innovation and a potential contributor to wicked problem solutions. At the same time, forestry is one of the traditional forest sectors, with the hierarchical organization and domination of public actors – the traits that are considered as barriers to innovation. The public sector is under increasing pressures to innovate and collaborate in solving wicked problems and providing public goods and services. In the last decade, the European Union strongly promoted social innovation as a mean for solving collective problems. Socially innovative solutions include shifting the roles of the public sector towards civil society in and provisioning public goods and services.

As the governance capacity of public actors for forest-based SI is a new and under-explored field, this research aimed in filling this gap. Thus, this research explored governance capacity of public actors for forest-based SI using several methods (literature review and analysis, survey, in-depth case study) that correspond to four interrelated studies: 1) development of analytical framework; 2) testing on the assumption of the role of public actors in SI; 3) in-depth analysis of public actors roles in the Charcoal land initiative and their capacities; 4) analysis of policy framework conditions.

As concepts of governance capacity and SI are very broad and elusive, the first study of this research identified key constructs of governance capacity and SI. Key identified constructs were actors (individual, organization, and SI initiative), their roles, governance sub-capacities (task-related and personality-related), and context (temporal, spatial, and social). The central construct of the framework was one of the roles, as it makes a bridge among individual actors, public organizations, and SI initiatives.

The proposed analytical framework assumed that public actors act as agents of SI. The first empirical step was to identify the organizational roles of public actors in SI and to test if those roles significantly influence SI initiatives. With this aim, the European wide online survey was used as a basic method in the second study. Although the response rate of the survey was too low to test the hypothesis, results indicated that public actors have multiple roles in SI initiatives. These roles ranged from an administrative and advisory role to lobbing, resourcing and networking role. Results also indicated that the roles of public actors do influence SI initiatives, both positively and negatively.

A proposed analytical framework was further applied in an in-depth case study using unstructured and semi-structured interviews and document analysis. The case study explored the Charcoal Land initiative that innovated and reconfigured traditional charcoal burning practice, and led to its spreading in Slovenia. The third study of overall research focused on the constructs of individual and organizational actors, as well as their roles. The results of this study indicated that individual public actors act as bridges between their organization and SI initiative. Results also pointed out that personality-related capacities - adaptive, learning and deliberative are crucial for obtaining organizational support and accessing resources necessary for initiative development.

The fourth study on policy framework conditions for SI in Slovenia showed that the current policy framework supports the establishment of social enterprises, so non-market, forestry-based SI initiatives cannot be institutionalized as such. Forest-based SI initiatives such as the Charcoal Land will still have to navigate through policy framework conditions, using their own capacities to apply for resources available through the Rural Development Programme and forest policy instruments that target cooperation and networking.

SUMMARIO

Poiché le foreste forniscono molteplici beni e servizi (ad esempio legno, sequestro del carbonio, turismo, ecc.), il settore che si occupa della gestione delle risorse forestali ha un potenziale molto elevato di eco-innovazione e può dare un contributo significativo alla soluzione di problemi altamente complessi (*wicked problems*). Allo stesso tempo, il settore forestale è uno di quelli più tradizionali, spesso caratterizzato da un'organizzazione gerarchica e dal dominio degli attori pubblici, che sono considerati ostacoli all'innovazione. Nell'ultimo decennio, l'Unione Europea ha fortemente promosso l'innovazione sociale e ha esercitato crescenti pressioni sul settore pubblico affinché introducesse innovazioni per risolvere problemi altamente complessi e fornire beni e servizi pubblici.

Poiché la capacità di governance degli attori pubblici per l'innovazione sociale nel settore forestale è un campo di indagine nuovo e finora poco esplorato, questa ricerca mira a colmare questa lacuna. In particolare, questa ricerca esplora la capacità di governance degli attori pubblici per l'innovazione sociale nel settore forestale adottando vari metodi di ricerca (una analisi bibliografica, un sondaggio su scala europea, e un caso studio di approfondimento), che corrispondono a quattro diversi studi tra loro correlati: 1) lo sviluppo di un quadro analitico e concettuale di riferimento; 2) un test dell'ipotesi relativa al ruolo degli attori pubblici nell'innovazione sociale; 3) un'analisi approfondita dei ruoli svolti dagli attori pubblici e delle loro capacità nel sostenere l'iniziativa selezionata come caso studio in Slovenia (*Charchoal Land Initiative*); 4) un'analisi approfondita delle condizioni del quadro politico e istituzionale in cui si è potuta sviluppare l'iniziativa usata come caso-studio.

Poiché i concetti di capacità di governance e di innovazione sociale sono molto ampi ed elusivi, il primo studio di questa ricerca ha identificato costrutti e interconnessioni concettuali chiave per chiarirne il significato e le interrelazioni. I costrutti-chiave identificati come elementi portanti di questi concetti sono: gli attori (singoli individui, organizzazioni e la stessa iniziativa di innovazione sociale esplorata come caso studio), i loro ruoli, le sotto-capacità di governance (legate ai compiti specifici assegnati agli attori ma anche alla loro personalità) e il contesto (temporale, spaziale e sociale). Il costrutto centrale della struttura teorico-concettuale e analitica di riferimento è quello dei ruoli, in quanto crea un ponte tra i singoli attori, le organizzazioni pubbliche e l'iniziativa di innovazione sociale. .

Il quadro analitico proposto presuppone che gli attori pubblici agiscano come agenti di innovazione sociale. Il primo passo nell'indagine empirica è stato quello di identificare i ruoli

organizzativi degli attori pubblici nell'innovazione sociale, e di verificare se tali ruoli influenzino significativamente le iniziative di innovazione sociale. A tal fine, nel secondo studio è stato utilizzato come metodo di base un ampio sondaggio realizzato attraverso un questionario online a scala europea. Sebbene il tasso di risposta dell'indagine sia stato troppo basso per consentire di testare l'ipotesi, i risultati indicano che gli attori pubblici svolgono ruoli multipli nelle iniziative di innovazione sociale. Tali ruoli vanno dal ruolo amministrativo e consultivo al ruolo di lobbing, a quello di erogazione di risorse e al networking. I risultati indicano anche che i ruoli degli attori pubblici influenzano le iniziative di innovazione sociale, sia positivamente che negativamente. .

Il quadro teorico-concettuale e analitico proposto è stato ulteriormente applicato nel caso di studio di approfondimento. Utilizzando interviste semi-strutturate combinate ad osservazioni partecipative ed etnografiche, il caso di studio ha esplorato l'iniziativa denominata Charcoal Land, che ha innovato e riconfigurato la pratica tradizionale della produzione del carbone di legna e ha portato ad una sua diffusione in Slovenia. Il terzo studio che compone la ricerca complessiva si è concentrato sugli attori individuali e su quelli strutturati in organizzazioni, nonché sui loro ruoli. I risultati di questo terzo studio indicano che i singoli attori pubblici fungono da ponti tra la loro organizzazione e l'iniziativa di innovazione sociale, e che le capacità legate alla personalità – capacità di adattamento, di apprendimento e di prendere decisioni - sono cruciali per ottenere il supporto organizzativo e avere accesso a tutte le risorse necessarie per lo sviluppo dell'iniziativa.

Infine, il quarto studio si è concentrato sulle condizioni del quadro politico e istituzionale per l'innovazione sociale in Slovenia. Tale studio ha dimostrato che l'attuale quadro legislativo e delle politiche sostiene la creazione di imprese sociali, pertanto altre iniziative di innovazione sociale non commerciali che siano sviluppate in ambito forestale non vengono ricosciute come tali e non trovano collocazione adeguata nel quadro istituzionale attuale. Iniziative di innovazione sociale realizzate in ambito forestale, come il caso della Charcoal Land esplorato in questa ricerca, dovranno destreggiarsi a trovare una loro strada nella complessità delle condizioni quadro delle politiche e delle leggi in essere, utilizzando unicamente le proprie capacità per identificare e accedere a possibili risorse disponibili attraverso ad esempio il Programma di Sviluppo Rurale europeo o gli strumenti di politica forestale che supportano la cooperazione e la creazione di reti.

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I. INTRODUCTION

This section is divided into three main sub-sections. Sub-section 1.1 lays down the research background pointing to the gap in the research field of forest-based social innovation (SI). Sub-section 1.2 briefly presents state of the art on the research on SI and public actors. Sub-section 1.3 outlines the research aims, objectives, and questions, and presents the structure of the dissertation.

1.1 Research background

For a long time, innovation in the public sector was assumed to be "incompatible with institutional inertia and the bureaucratic 'red tape' of the public sector" (Nicholls et al., 2015, p. 148). Due to political governing of the public sector, lack of economic incentives and complex regulations, innovation was not considered relevant for the public sector, as there "competition is replaced by hierarchical command and control" (*Ibid*.).

In a similar manner, the European forest-based sector has been regarded as traditional and inert to innovation (Brukas, 2015; Buttoud et al., 2011; Innes, 2009; Weiss, 2013a). In many European countries, the forest-based sector was dominated by public actors, characterized by top-down decision making and long bureaucratic procedures (Liubachyna et al., 2017b, 2017a; Rogelja and Shannon, 2017; Secco et al., 2017). The hierarchical organization and prevalence of public actors made the forest-based sector "risk-averse and unwilling to develop policies that can further innovation" (Innes, 2009, p. 202). In addition, European forest-based sector was historically oriented to wood-production, while non-wood forest products and other services (such as recreation, health) received less attention being termed as 'other' or 'secondary' forest products (Ludvig et al., 2018b, 2016b; Weiss et al., 2017a; Živojinović et al., 2017).

Yet, the European forest-based sector recently entered the state of 'creative deconstruction' (EFI, 2014; Stern et al., 2018). New bio-based technologies, emerging markets for non-wood forest products and services, and increasing societal demands and pressures are making the forest-based sector an increasing source of various innovations (Ludvig et al., 2016a; Weiss et al., 2017a; Winkel, 2017; Živojinović et al., 2017). "Notwithstanding, the sector has high economic development potentials, due to the growth of timber demand and the use of sustainable products in Europe in combination with a recent hype for using bio-technology, bio-energy and building with wood for climate change mitigation (bio-economy)" (Weiss et al., 2017b, p. 121). Besides wood, the forest-based sector has a high potential in provisioning

other, non-wood forest products and services, such as carbon sequestration, well-being, and recreation, wild forest fruits, etc. (Ludvig et al., 2016a; Masiero, 2013; Živojinović et al., 2017). With this potential, the forest-based sector can significantly contribute "to the solution of global environmental problems such as rising carbon dioxide concentrations and associated climate change" (Innes, 2009, p. 203).

In the last decade European Union (EU) reached for social innovation (SI) (amongst other innovation types[1]) as a solution to a range of today's global environmental and societal problems that government and market were not able to solve (Edwards-Schachter and Wallace, 2017a; Moulaert, 2013; Moulaert et al., 2017; Mulgan et al., 2007; Nicholls et al., 2015). Those problems range from global environmental degradation, climate change, energy, and food security to rural depopulation, aging, poverty and financial crises (Nijnik et al., 2019; Secco et al., 2019). The EU put significant effort to foster and speed up the process of SI (Hubert, 2010a) through initiatives such as the Social Innovation Europe initiative, European Public-Sector Innovation Scoreboard and Innobarometer.

Simultaneously with the increasing popularity of SI in policy circles, SI gained attention in academic research (Agostini et al., 2017; Edwards-Schachter et al., 2012; Van Der Have and Rubalcaba, 2016). Yet, until a few years ago, forest research mainly focused on product (i.e. goods and services) and process innovation (i.e. technological and organizational innovations), followed by policy and institutional innovations (Kubeczko et al., 2006; Rametsteiner and Weiss, 2006; Stern et al., 2018; Weiss et al., 2011a). Nowadays SI in the forest-based sector is increasingly attracting attention (Górriz-Mifsud et al., 2019; Hewitt et al., 2019; Ludvig et al., 2018a; Nijnik et al., 2019; Nybakk et al., 2015; Sarkki et al., 2019; Secco et al., 2019).

Research on SI in the forest-based sector is still modest and focused on several disconnected topics. Few studies addressed policy framework conditions concluding that policies often hinder the development of social innovations (Ludvig et al., 2018a; Rogelja et al., 2018a). Several studies explored the success factors for SI, relating them to personal leadership and trust (Kluvánková et al., 2018), human values (Melnykovych et al., 2019), and volunteering (Ludvig et al., 2018b). One study addressed the decision-making in forestry, finding that it "requires social innovation and a high level of stakeholder competence and capacity-building" (Nijnik et al., 2018, p. 210).

[1] For innovation types in forestry, please refer to Weiss et al. (2011)

This thesis contributes to the research on forest-based SI and forest governance, by exploring the ability of public actors to collaboratively engage in the reconfiguration of traditional forest practices (such would be charcoal burning) and delegate the power to civil society actors. With an in-depth analysis of the case of creation of new relationships among private forest owners (charcoal burners), state forest service, and local administration, this research pinpoints to a hybrid mode of forest governance, where the traditional hierarchical organization is combined with participatory forest management and decision making. Although this research shows that socially innovative practice of charcoal burning was able to scale out and up due to the collaborative engagement of public and civil actors, it also pinpoints that the state forest actors still have a crucial role in forest-related activities.

The results of this research could be of interest to the forest administrators and practitioners, as the outcomes of the case studied can be regarded as best practice examples. Further on, the forest policymakers and administrators can derive valuable lessons on governance capacities, as the results show that personal capacities of involved public actors are as equally important as administrative, or task-related capacities of public organizations.

1.2 Forest governance, social innovation, and public actors

1.2.1. Forest governance

"Traditionally, governance refers to the hierarchical relationship between government actors as 'subjects of control', and private or civil society actors as 'objects of control'" (Böhling and Arzberger, 2014, p. 43). In forestry, traditional, old modes of governing were also referred to as state forestry, or forest government (Arts, 2014a; Buttoud et al., 2014). Although private forest ownership was recognized in some countries, forests were mostly state property, and co-management of forests by rural communities (i.e. forest commons) became rare (Krott, 2005). As forests were public goods, managing them was vested to the governments that incorporated scientific forestry principles to ensure sustainable yields of woods (Arts, 2014a; Scott, 1998).

Yet, this traditional, government-centered, and expert-based forestry had to follow the steps of modernization and to adapt to the new demands. "While scientific forestry brought gains in terms of increased timber production and employment, both ecological and social issues related to forests were marginalized for too long in this paradigm, which forced the forest sector to change towards the principles of sustainability" (Arts et al., 2014, p. 18). The change of forest sector towards the principles of sustainability included reforms such as forest decentralization, restitutions, the introduction of market mechanism and community involvement in forest

management (Dobšinská et al., 2015; Lawrence, 2009; Šulek et al., 2016; Weiland, 2010; Živojinović et al., 2015).

These changes marked what is called "a shift from government to governance" (Rhodes, 1996), which denoted the reduced power of the government, and dispersed responsibilities among various actors coming from the public, market and civil sector. While hierarchical and authoritative modes of governing were referred to as government, new modes of governance or governance arrangements[2] implied regulation of social behavior through networks and not solely through hierarchical mechanisms (Fukuyama, 2016). Thus, non-traditional governance can be defined as "society-centered way of governing or steering, accentuating coordination and self-governance, manifested in different types of policy arrangements, which are an expression of increasing encroachment of state, civil society, and market" (Arts and van Tatenhove, 2006, p.33).

As governance is about "establishing, promoting and supporting a specific type of relationship between governmental and non-governmental actors in the governing process", governance modes can, besides hierarchical, take the private, market, or network-centered form (Howlett and Ramesh, 2014, p. 318). In forestry, new modes of governance are observable on multiple levels (from international to local), include multiple actors and sectors, use market-based instruments, and utilize participatory approaches (Böhling and Arzberger, 2014; Secco et al., 2014). Examples of new modes of governance include, among many others forest certification, participatory forest management, and payment for ecosystem services. These examples illustrate the governing practices of the market and the civil society, where the state is also involved …"[B]ut its role and function have (to be) changed in the new modes of governance. Instead of being the authority from the top, the commander or the controller, the state has now become an (more) equal partner vis-à-vis private and civic ones in new governance networks and partnerships" (Arts, 2014a, p. 19).

Despite various administrative reforms that had a tendency of self-regulation and subsidiarity, forest sectors in many European countries seem less impacted and prone to these changes and new modes of governance. New forest governance arrangements were encouraged (i.e. good forest governance reforms), but their effective implementation in practice is still problematic (Secco et al., 2017a; Sergent et al., 2018)."Network governance, new policy instruments, and ideational innovation have definitely begun to make inroads in the European forest sector, but

[2] ". Governance arrangements can be defined as "a set of ideas, rules and relationships that shape and steer the decision-making process in a given policy field" (Sergent et al., 2018, p. 969).

at its core, state forestry is still dominant, leaving the old forestry policy regime untouched. While findings do vary from country to country, the state – which has long embodied the sole political authority in the forest sector – is still a strategic key player in the decision-making process, even if it no longer has a monopoly on political power, and despite the fact that the framework for the exercise of power has evolved over the last twenty years" (Sergent et al., 2018, p. 975).

1.2.2. Social innovation

While new modes of forest governance denote the move from the authoritative state towards participatory and self-governance, social innovation (SI) features similar characteristics, as it is about the reconfiguration of social practices with voluntary involvement of civil society (Polman et al., 2017). Regardless of increasing attention and scientific interest in social innovation (SI), there is still no unified understanding of it. Diversity of definitions is due to the fragmented research on SI making it an ambiguous and contested concept. Moulaert et al. (2005) traced SI back to management science, creativity, territorial development, and political science and public administration. In 2016, Van Der Have and Rubalcaba identified four research communities focusing on SI: psychology, creativity, social and societal challenges, and local development. They also identified two main conceptual elements of SI: "1) a change in social relationships, -systems, or -structures, and 2) such changes serve a shared human need/goal or solve a socially relevant problem" (Van Der Have and Rubalcaba, 2016, p. 1932).

Further efforts in categorizing concepts of SI are the study of Edwards-Schachter and Wallace (2017a) who distinguished 3 main clusters of SI definitions as related to the processes of social change, sustainable development, and services sector. They also identified the core characteristics of SI definitions: "a 'process' involving the distinctive participation of the 'civil society/third sector', the 'production of social change' through 'change in social practices'; the orientation to solve 'unmet social needs and complex problems' and the generation of 'social values' "(Edwards-Schachter and Wallace, 2017a, p. 73).

The latest, and probably the most critical achievements in categorizing SI definitions and characteristics are of Marques et al. (2018) who distinguished among structural, targeted and instrumental SI. Structural SI refers to wide social change in scale and scope, targeted SI is either radical or complementary to current socio-economic institutions, and instrumental SI is used to "rebrand previous agendas in a way that is more appealing to stakeholders" (Marques et al., 2018, p. 496).

In this dissertation, I used the definition particularly developed for the fields of forestry, agriculture and rural development[3] that explains 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." (Polman et al., 2017, p. 12). This definition features all core elements of SI identified by Edwards-Schachter and Wallace (2017a) and Van Der Have and Rubalcaba (2016). First, it sees SI as a response to social, environmental, economic, or other wicked problems that were not successfully solved before (Polman et al., 2017; Sarkki et al., 2019; Slee, 2019). Second, it aims to improve the well-being of wider societal groups, bringing in the element of intentional action for the 'common good' (Baker and Mehmood, 2013; Bock, 2016; Neumeier, 2017, 2012). Third, focusing on a reconfiguration of social practices implies that SI is a process resulting in new organizations, new networks or new governance arrangements (Polman et al., 2017; Secco et al., 2017b).

In forestry SI can take 3 main types:

- "SI covering forest owners' objectives in combination with social benefits and needs
- SI covering forest policy objectives in consistency with regional/rural development
- SI covering collective civil society involvement and tensions within the forestry actors' network" (Ludvig et al., 2019, p. 276).

The first type of SI usually takes the form of social enterprises and/or volunteer work. and focuses on vulnerable groups in society (i.e. migrants, elderly, unemployed). The flagship example of this SI is *Green Care* which is an umbrella term for a broad spectrum of health-promoting interventions (care farming, animal-assisted interventions, social and therapeutic horticulture, or healing gardens) (Haubenhofer et al., 2010; Ludvig et al., 2019). It is an "innovative approach that combines simultaneously caring for people and caring for land through three elements that have not been previously connected: (1) multifunctional agriculture and recognition of the plurality of agricultural system values; (2) social services and health care; and (3) the possibility of strengthening the farming sector and local communities " (García-Llorente et al., 2018, p. 1282). Green care includes health services that integrate people with disabilities (physical, mental or emotional) or socially disadvantaged (i.e. young offenders, unemployable adults) in education and employment on farms. The main

[3] This definition was developed within the Horizon 2020 project Social Innovation in Marginalized Rural Areas – SIMRA (http://www.simra-h2020.eu/). Aim of SIMRA project is to advance understanding of social innovation and innovative governance in agriculture, forestry and rural development. It also aims at supporting SI in marginalized rural areas across Europe, focusing on the Mediterranean region as there is limited evidence of outcomes and supporting conditions.

goal of Green Care is to improve a person's social, physical, mental, and even educational well-being (Ludvig et al., 2019). In Europe, many countries (e.g. Netherlands, Norway, UK, Sweden, Germany, Austria) developed different programs with specific characteristics (de Boer et al., 2017; García-Llorente et al., 2018; Haubenhofer et al., 2010; Ludvig et al., 2019). Forest related example is an Austrian policy program *Green Care Forest* that stimulates forest owners to put a focus on social aspects of their forests and open them for social initiatives, projects, and engagement in providing forest-based products and services.

The second type of SI is related to policy objectives of multifunctional ecosystem services and regional development. "Forest owners act collectively as parts of the rural society at large with initiatives like the formation of regional or marketing labels, bioenergy initiatives or activities around non-timber forest products" (Ludvig et al., 2019, p. 276). Examples of this SI type are cooperatives of farmers and forest owners that establish and operate biomass-based district heating systems in rural villages. In this way, they created a market for forest residues also tackling air pollution problems. This type of SI is scaling out, by spreading bio-energy villages across Europe (see http://biovill.eu/). Another example is the *Associazione Tutela del Marrone di Castione* where chestnut growers organized activities, services and gourmet events around their products (Ludvig et al., 2016a). The initiative started with the goal to keep the abandoned cultural tradition of chestnut production alive but eventually led to the creation of jobs around the production, processing, and marketing of this fruit and associated tourism services. This type of SI also belongs to the *Charcoal land initiative* from Slovenia which is in-depth analyzed in Section IV. This initiative started with the idea to support local development through the revived traditional charcoal burning but evolved through diversification of activities related to the charcoal burning (walking paths, accommodation, and local food). Si in these examples is related to the creation of economic revenue for the region through collaboration and engagement of local inhabitants with regional actors (e.g. forest or agricultural agencies, research institutes and/or local administrations).

The third type is related to civil society participation, grassroots movements and new forms of stakeholder involvement in forest activities. This type of SI is closely related to the changes in forest governance. SI in forest governance can be defined as ''reconfigurations of relationships between state, market actors, civil society and science that facilitate a movement from authoritative state to participatory forest governance to better meet the concerns of local resilience, environmental and social sustainability, people on the use of ecosystem services'' (Sarkki et al., 2019, p. 1602). Examples of this type of SI include volunteer forest fire brigades

in the Mediterranean, participatory planning in forest management in Ukraine or common engagement for communal woodland management in Whales. pro-active locals organizing their efforts to tackle wildfires. Volunteer forest fire brigades are voluntarily organized groups of local inhabitants in Mediterranean fire-prone areas, such as Greece, Catalonia, and Portugal. They are involved in activities that range from supporting firefighters' efforts, first attack and/or year-round prevention (Górriz-Mifsud et al., 2019). In Ukraine, the FORZA project (2004–2010) initiated a shift towards participatory forest governance "by identifying and assessing the role of forest governance stakeholders and piloting a two-level participatory planning process combing highly participatory village level Community Development Plans (CDP) to more technical regional Forest Management Plans" (Sarkki et al., 2019, p. 1608). After the project, partners established an Agency for sustainable development of the Carpathian Region. The third example is the Woodlands Skills Centre in Wales of communal woodland management that combines social forestry, and communal land management with skills-based training educational services and crafts making (Ludvig et al., 2018). These examples based on the active and strong involvement of local individuals and groups that support the initiatives through investments or cooperation with local and regional social enterprises, charity organizations and other services users.

1.2.3. Public actors and governance capacity for social innovation

As same as in new governance arrangements, all types of SI imply collaboration among various types of actors (Fukuyama, 2016; Howlett et al., 2017; Sørensen and Torfing, 2013). Collaboration is more than cooperation which is about the exchange of information and knowledge. Also, it is more than coordination which is about synergies and avoiding overlaps in acting. "Collaboration involves a sustained interaction through which a plethora of actors aims to find common solutions to shared problems. In collaborative processes, social and political actors work on a shared problem in order to find mutually acceptable ways to conceptualize and solve it. In the course of interaction, the actors will not only transform the shared object but also their roles and identities and the logic of appropriate action that guides their actions"(Sørensen and Torfing, 2013).

In both SI and new governance arrangements, public actors still have a crucial role, as they have the authority to decide who and how much will be a part of certain governance arrangements or initiatives (Capano et al., 2015; Howlett and Ramesh, 2014). "The opening of political processes and participatory approaches give the market and civil society actors leeway for developing their ideas for social initiatives" (Butzin and Terstriep, 2018, p. 78). New

governance arrangements based upon civil society-public actors' relations might operate under "the shadow of hierarchy, i.e. legislative and executive decisions, in order to deal effectively with the problems they are supposed to solve" (Héritier and Lehmkuhl, 2008, p. 1). This situation corresponds well with the instrumental SI, as defined by Marques et al. (2018), where public actors would use the brand of SI to delegate the responsibilities, but not the authority to civil society. "The state plays an important role here: the space left by capital for non-market-economy-oriented social innovation is largely dependent on the interpretation the state gives to it—and on the state as an arena for class struggle. The extent to which the state maintains its independence vis- a`-vis privatization and deregulation movements is key to the definition of the action space of social innovators in various domains" (Moulaert et al., 2005, p. 1999).

To avoid engagement of public actors in non-instrumental SI, public actors need to collaborate with other societal actors outside the shadows of hierarchy in solving forest-related problems (Dang et al., 2015; González and Healey, 2005). As only a few studies until now addressed SI in the public sector in general (see Rana et al., 2014), little is known about public actors' ability to collaboratively engage in SI. Therefore, there is a need to understand what determines this ability (Ferreira et al., 2018). I refer to it as to the 'governance capacity of public actors for SI'. The forest-based sector makes an interesting case to explore governance capacity for SI having in mind its traditional hierarchical organization, and partial change towards new modes of governance.

1.3 Research aim, objectives, questions and outcomes

Having in mind the attention SI is attracting in the last decade, and the predominantly traditional organization of the forest sector, the overall aim of this research is *to explore the governance capacity of public actors for forest-based SI*. For fulfilling the main aim, 3 interconnected specific objectives (SO) are:

> **SO_1:** *To identify key constructs of governance capacity of public actors for social innovation*
>
> **SO_2:** *To develop a framework for analyzing the governance capacity of public actors for forest-based social innovation*
>
> **SO_3:** *To test and refine the proposed framework for analyzing the governance capacity of public actors for forest-based social innovation, by empirically applying it in a case study*.

As there is almost no literature on governance capacity for SI, the first specific objective (SO_1) was set out to explore the key constructs of the governance capacity of public actors for SI. This was done through a literature review. Fulfillment of this objective led to the identification of the numerous constructs of governance capacity, as well as those of SI, depending on the standpoint of the authors and field of the analyzed studies.

Due to the numerous identified constructs, the second specific objective (SO_2) had a purpose of identification of crucial constructs for the analytical framework that governed empirical research. The draft analytical framework with crucial constructs was developed based on the literature review and analysis

To fulfill the third specific objective (SO_3) of testing and refining the analytical framework, the draft framework was empirically applied using a survey and case study. While the main purpose of the survey was to check the hypothesis that the role of public actors influences the development of SI initiative, a case study predominantly aimed at the exploration of governance sub-capacities of public actors involved in forest-based social innovation initiative based on their roles.

While the background of social innovation studies is already presented in the previous subsection (1.2), Article 1 in its introduction provides the background on governance capacity. Table 1 presents the connections among overall research aim, specific objectives, and research questions with research outcomes and articles that compose this dissertation.

The first outcome addresses SO_1 and SO_2 by referring to identified key constructs of governance capacity for social innovation and the developed framework for the analysis. This outcome is the main result of the literature review and analysis and is presented in Study 1 (Section II).

Table 1. Research aim, objectives, questions, outcomes and articles

Research aim	Specific objectives	Research questions	Research outcomes	Articles
To explore the governance capacity of public actors for forest-based social innovation	***SO1.****To identify key constructs of governance capacity of public actors for social-innovation*	**1.1** What are the key constructs of the governance capacity of public actors for social innovation?	**RO1**. Identified key constructs and developed a framework for analyzing the governance capacity of public actors for forest-based social innovation	Study 1
	SO2.*To develop a framework for analyzing, governance capacity of public actors for forest-based social innovation*	**2.1** What identified constructs and governance sub-capacities of public actors are crucial for forest-based social innovation?		
	SO3*. To test and refine the proposed framework for analyzing the governance capacity of public actors for forest-based social innovation, by empirically applying it in a case study.*	**3.1** How does public actors' role influence forest-based social innovation initiatives? **3.2** What are the governance sub-capacities of public actors involved in the forest-based social innovation initiative?	**RO2**. Applied and improved framework for analyzing the governance capacity of public actors for forest-based social innovation	Study 2 Study 3 Study 4

Source: Own elaboration

While the background of social innovation studies is already presented in the previous subsection (1.2), Article 1 in its introduction provides the background on governance capacity.

<u>*Study 1*</u> is titled Study 1: Towards the framework for analyzing the governance capacity of public actors for social innovation. This study is a prepared article for submission to the *Social Enterprise Journal, Special Issue: The Role of Governments and Public Policies in Social Innovation Processes* or *Innovation: The European Journal of Social Science Research*. The submission is planned by December 15th. The framework identified the context, role, organizational actors, individual actors and two sets of governance sub-capacities as crucial constructs of governance capacity for social innovation. The article laid down the conceptual background of overall research (section III), as it identifies the crucial constructs of the

governance capacity of public actors for social innovation and proposes a framework that guided further research.

The second outcome refers to the applied and improved framework for analyzing the governance capacity of public actors for social innovation. The composite parts of this outcome are Study 2, Study 3 and Study 4, as well as connecting sub-section, and discussion section of the thesis.

Study 2 with tentative title Study 2: Roles of public actors in social innovation initiatives in marginalized rural areas are presented in section 4.1. With this article, the aim was to test the hypothesis that the role of public actors influences the development of social innovation initiatives. The results contribute to SO_2, as the study investigated the organizational roles of public actors as one of the crucial constructs of the framework. Due to the low response rate, preliminary descriptive results are enclosed as a part of this dissertation, whereas the study is yet to be finalized as an article. This study utilized the survey method that required the translation of questionnaires into seven different languages and the search the contacts of the SI initiatives were long (as contacts were not available from SIMRA project due the privacy policies). As the preliminary results obtained so far are interesting and promising, the deadline for the invited respondents is extended to allow to improve the response rate. The low response rate is already an indicator of the still unknown topic of SI by those who are involved in the initiatives.

Study 2 contributed to the second outcome, as it investigated how each of the organizational roles of public actors influenced SI initiatives. To some extent Study 3 also contributed to the first outcome, as it identified the roles of public actors in SI confirming that they might be internal agents of SI. Study 2 is followed by a short chapter (section 4.2) that describes the spatial and social context of the case-study (sub-section 4.2.1), and briefly introduces the 20 years of the development (temporal context) of analyzed social innovation initiative (sub-section 4.2.2). The description of the spatial and social context of the case study (sub-section 4.2.1) was submitted as an Annex of together with Study 3 to the Journal of Forest Policy and Economics. Sub-section 4.2.2 was originally part of the submitted Study 3, but in that form, the article was too long and dispersed. That is why the description of 20 years in the initial development is presented as a separate chapter, with the intention to publish it as an article after the finalization of a Ph.D., probably in the journals Sociologia Ruralis, Rural Sociology, or Journal of Peasant Studies.

Study 3 is titled Study 3: Role of public actors in the forest-based social innovation - The case of the Charcoal Land initiative in Slovenia. This study is an article that is currently under revision in the Journal of Forest Policy and Economics. This study presents a core of the case study analysis, as it explores the roles of public actors involved in the first 3 years of the development of analyzed SI initiative.

Study 4 is titled Study 4: Implications of policy framework conditions for the development of forest-based social innovation in Slovenia. It features an article that addresses the current policy context of the case study in the present, which is necessary for the discussion about the governance capacities of public actors. This study was published in the Journal of Forest Policy and Economics 95, 147–155. doi:10.1016/j.forpol.2018.07.011

General discussion (section V) unifies all findings (Studies 2, 3, and 4) and discusses the analytical framework (Study 1) connecting the identified roles of public actors with governance sub-capacities.

II. LITERATURE REVIEW AND ANALYSIS

2. Study 1: Towards the framework for analyzing the governance capacity of public actors for social innovation

Details: This study is prepared as an article for the submission to the *Social Enterprise Journal, Special Issue: The Role of Governments and Public Policies in Social Innovation Processes (CiteScore = 0.93)* or *Innovation: The European Journal of Social Science Research (IF_{2017} = 1.018)*

It lays down the conceptual basis for the overall research design and methodology and introduces the concepts that were empirically analyzed

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2.1 Abstract

This study aimed at developing the framework for analyzing the governance capacity of public actors for social innovation. For that purpose, we used a systematized configurative literature review and analyzed studies on governance capacity and social innovation. We found out that there is no common definition of governance capacity or what comprises it. From the studies on governance capacity, we deducted four basic analytical concepts - agency, relational structure, institutions, and context. We identified four task-related governance sub-capacities – analytical, coordination, delivery and regulatory, which connect the individual public actors to his/her respective organization. Based on the studies on SI, we distinguished among public actors as endogenous and exogenous agents of SI initiatives identifying 12 different roles they can have. Translation of studies on governance capacity into studies on SI led us to conceptualize the governance capacity of public actors for social innovation as their ability to move away from prescribed roles in steering the reconfiguring of social practices. We propose a framework constructed around individual public actors and their roles. As individual public actors are balancing between two often different worlds (the one of the state apparatus, and the other of social innovation), besides their task-related capacities they need another set of sub-capacities for engaging in SI initiative. For being internal agents of SI public actors need resource, learning, deliberative and adaptive capacity which we call personality-related governance capacities. Task-related and personality-related governance sub-capacities are not static and independent, as they are contingent on the spatial, temporal and social context in which SI initiatives act.

Keywords: state agents, governmental actors, capabilities, social innovation, analytical framework

Highlights

- We propose a framework for analyzing the governance capacity of public actors for social innovation
- The framework builds on concepts of agency, relational structure, institutions, and context
- Agency is operationalized through governance capacity, individual and organizational actors, and role
- Governance capacity is comprised of task-related and personality-related governance sub-capacities

- The role is a concept used to bridge the divide between individual human agents and social structure

2.2 Introduction

Given the number[4] of scientific articles on the topic of governance capacity, one would be surprised by the high diversity of understandings of what it is and what comprises it. Although most studies have a background in social or political science, there is no common definition of "governance capacity" or approach for analyzing it. But this state of the art is not strange at all, as governance capacity is a complex construction of two concepts – the one of governance and the other of capacity.

If not specified, the concept of capacity is imprecise, because capacity can refer to a property of a system, as well as of an agency. As a system property, capacity might refer to the total amount of something that can be contained or produced, or to the occupied position or a role. As a property agency, capacity refers to the ability of somebody to do something. (Cambridge English Dictionary, 2018; "Capacity | Definition of Capacity by Merriam-Webster," 2018)

The concept of governance itself has a characteristic of a "quasi-concept" (Bernard, 1999, p. 48). Governance is, from the one side, legitimized by the scientific community through empirical analysis, and from the other side, vague enough to be adaptable to various political situations. This vagueness of governance explains why there is no common definition or understanding of what it exactly is. For some, it is about the setting, application, and enforcement of the rules (Kjær, 2004, p. 10). For others, it is about "the ascendancy of a new system in which regulation is produced in participatory fashion by public and private actors collaborating with one another" (Baccaro and Mele, 2009, p. 2) or about "self-organizing inter-organizational networks" emerging during reforms (Rhodes, 1998). In broad terms, the governance refers to how the society is governed, and by whom (Bevir, 2013, 2010).

No matter of the definition or approach, governance studies (tightly related to policy studies) share the interest in the change of actors' roles (i.e Bevir et al., 2003; Knill and Lehmkuhl, 2002), the power redistribution behind it (i.e. Ansell and Gash, 2008; Healey, 2006), and the impacts of such processes (i.e. Howlett and Ramesh, 2016; Swyngedouw, 2005). Massey and Johnston-Miller (2016, p. 665) summarized the consensus that governance involves actors, institutions, networks, relationships (power delegation), voluntarily collective action, and

[4] On June 1st, 2018 SCOPUS search using keywords "governance capa*" resulted in 411 items, where as WOS search resulted in 211 items.

capacity to achieve policy objectives As such, governance studies extensively focused on a a "good governance" constructs such are accountability, equity, efficiency, effectiveness, legitimacy, participation, and transparency during or after policy reforms in developed and developing countries, inevitably dominated by political science perspective. Governance capacity thus has to do with the capacity of a network of actors to achieve policy objectives (Arts and van Tatenhove, 2006). Such network would include various actors into participatory engagement of providing public goods and services. This arrangement would in consequence shift roles and together with them, responsibilities and resources from the state to civil society to be used for.

This shift of roles towards civil society in solving collective problems and provisioning public goods and services is increasingly gaining attention under the concept of social innovation. While popularized by the European Commission as a tool for implementing policies that should solve contemporary wicked problems, social innovation is heavily criticized for its vagueness and lack of theoretical foundations and empirical evidence(Edwards-Schachter and Wallace, 2017a; Massey and Johnston-Miller, 2016). In their critical reflection Massey and Johnston-Miller (2016, p.673) argue that social innovation is not a new mode of governance, but "a continuum of neoliberalism with the state encouraging non-state or community activism, shifting service provision onto societal sectors and steering with minimal state investment".

While we agree with the critical viewpoint of Massey and Johnston-Miller on the instrumental use of social innovation and its common characteristics with public governance, we are also aware that they reflect on it from a political perspective. This political perspective follows 'governance' tradition and looks at social innovation in reference to the policy process of public goods and service delivery. That is how they say: "Thus, the social construction of social innovation depends on whether the network of actors or organizations considers the mode of service delivery as a departure from previous, extant practice and constructs meaning around what it considers as 'new'" (Massey and Johnston-Miller, 2016, p. 670).

Although this perspective sheds necessary light on power dynamics behind the instrumental use of SI, it simultaneously constructs social innovation based on the dominant, neoliberal discourse itself. By focusing on the delivery of public goods and services, it observes all public actors as exclusively driven by policy goals[5]. While activities of public actors have to be coherent with policy, as well as organizational goals, some of them might be driven by personal

[5] This perspective is characteristic for the sociological rational choice theory (see Coleman, 1990). Public actors have defined interests, range of available resources, and clearly defined policy preferences.

or community goals. What we want to highlight is that by assuming certain agential properties of public actors, this critical political perspective neglects the very fact that social innovation is contingent on the context and is socially constructed (Edwards-Schachter and Wallace, 2017a; Massey and Johnston-Miller, 2016).

So, what governance capacities public actors need for social innovation? As the literature on this topic is almost nonexistent, this study aims to develop a framework for analyzing the governance capacity of public actors for social innovation. Add the definition of governance

The article is structured in the following way. The second section outlines the methodology systematized, configurative literature review dealing separately with the studies on governance capacity and social innovation. The result section is divided into two parts. The first part presents the constructs of governance capacity and preliminary synthesis of those constructs into basic analytical concepts. The second part presents the analysis of SI studies focusing on public actors' activities and roles in SI initiatives. In the discussion section, we synthesize findings from both sets of literature and propose an analytical framework. In the end, we derive the short conclusions on our framework.

2.3 Methodology and methods

As our aim is to develop a framework for analyzing the governance capacity of public actors for social innovation, we approach the literature review and analysis inductively. Inductive method is suitable as it does not tie us to the particular theory at the beginning, thus allowing us to take into consideration various theoretical perspectives of previous studies while identifying basic analytical constructs (Dewey, 1938).

Because of the lack of pre-existing theoretical frameworks on the topic, we adopted a step-by-step analytical approach, building our own framework based on a progressive cumulative process of making sense of the sub-concepts of the general construct. We divided our research into two main steps. In the first step, we focused on the identification of the basic constructs within the studies on governance capacity, while in the second we focused on the public actors within the studies on social innovation. For identifying the basic analytical constructs, we used a configurative review that is suitable to generate theories and seek important themes or key concepts. In configurative review published studies are treated as datasets where the exhaustive search for all studies is unnecessary (Gough et al., 2012). That is why we focused our search on examples that provide breadth, representation, and are rich in information.

For the search and selection of the studies, we applied the systematized literature review method due to the limited resources[6]. Systematized literature review attempts to include the elements of the systematic review process without claiming that the resultant output is a systematic review (Grant and Booth, 2009, p. 112). We followed the steps of the systematic review approach, as it is presented in Figure 1. Those steps include 1) Identification of studies to be included in the review; 2) Screening of identified studies; 3) Eligibility assessment; 4) Full document reading; 5) Data extraction and synthesis.

We conducted the search of the literature on governance capacity in the SCOPUS database on February, 21st 2017, looking into search strings in Titles, Keywords and Abstract (*Table 2*). The only filter used in SCOPUS was for the English language.

Table 2. Results of SCOPUS search on governance capacity

Search strings	**No of studies**
"governance capa*"	293
"governance capa*" AND ana*	78
"governance capa*" AND framework*	49
"governance capa*" AND assess*	42
"governance capa*" AND eval*	18
"governance capa*" AND element*	13
Total	**493**
After duplicates removed	**296**

Source: Own elaboration

[6] As this study is a part of a Ph.D. research, we were constrained by the available time, so only the main researcher conducted literature analysis.

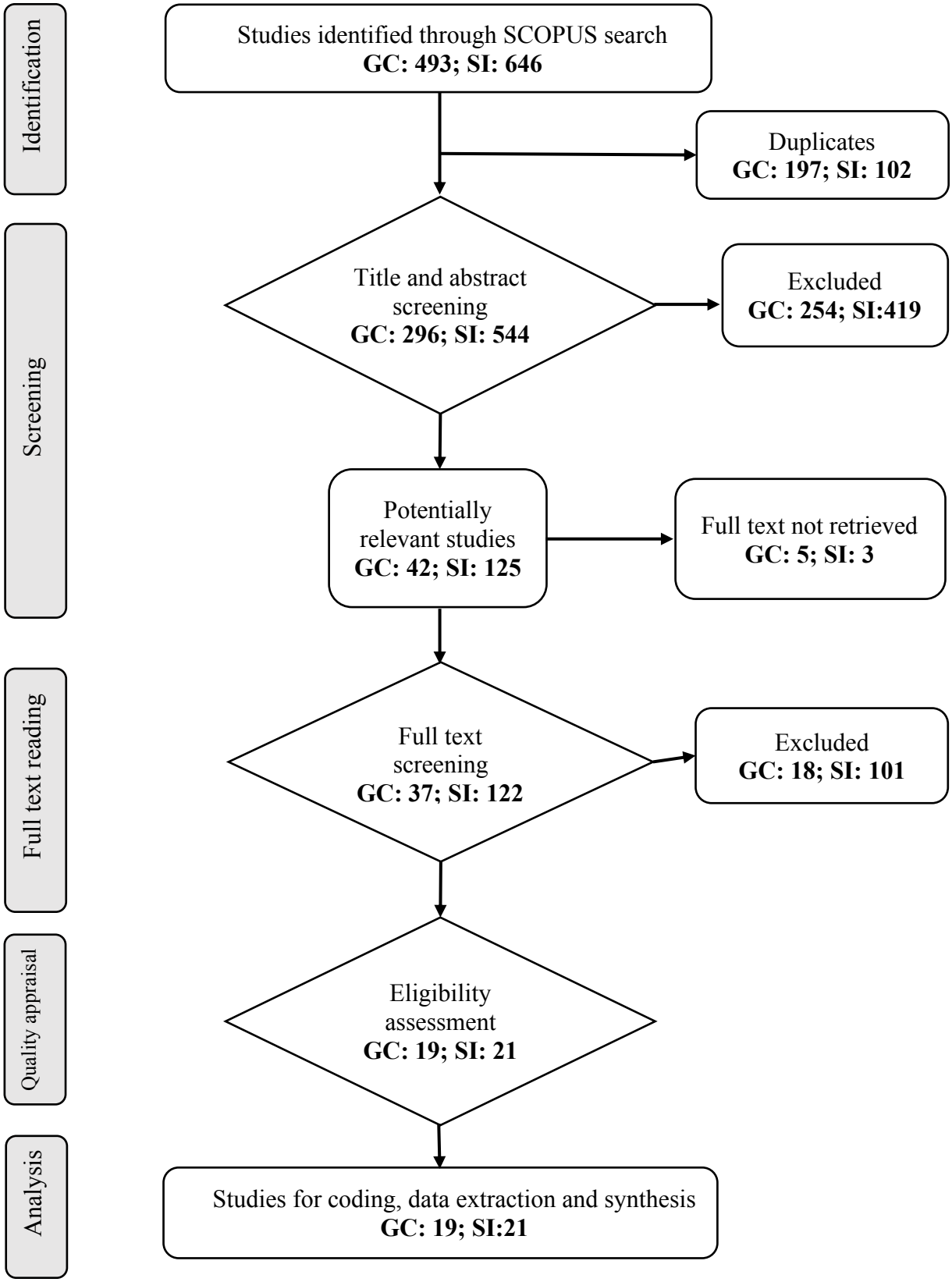

Figure 1. Flow diagram of the selection process of the literature on governance capacity (GC) and social innovation (SI) (Source: Own elaboration)

As iterative search needs to have clear overarching rules for inclusion (Gough et al., 2012), we defined inclusion criteria for the screening of abstracts and full-text reading. In the screening phase, inclusion criteria were that the terms 'governance capacity', 'governance capacities', 'governance capability' or 'governance capabilities' have to be present in the title, keywords, or abstract of the study. During the full text reading our inclusion criteria was that the governance capacity has to be defined in the study.

We adopted the 'investigative' line for the literature search and included findings from the literature on governance capacity in the search of the literature on social innovation. We conducted the search of the literature on social innovation using the SCOPUS database, on December 8th, 2017, by looking into the Titles, Keywords, and Abstracts of the studies (Table 3).

Table 3.Results of SCOPUS search on social innovation

Search strings	**No of studies**
("social* innovat*" OR "social* enterpr*") AND "forest*"	21
("social* innovat*" OR "social* enterpr*") AND "capa*" AND ("analy*" OR "coordin*" OR "regulat*" OR "adapt*" OR "deliver*" OR "learn*" OR "resourc*")	233
("social* innovat*" OR "social* enterpr*") AND ("public actor*" OR "state actor*" OR "public administra*")	28
("social* innovat*" OR "social* enterpr*") AND ("govern*" OR "govern* arrang*" OR "govern* mechanism*") AND ("support*" OR "enabl*" OR "facilita*")	237
("social* innovat*" OR "social* enterpr*") AND ("govern*" OR "govern* arrang*" OR "govern* mechanism*") AND ("hinder*" OR "disabl*" OR "hamper*" OR "limit*" OR "obstacl*")	127
Total	**646**
After duplicates removed	**544**

Source: Own elaboration

In the screening phase, an inclusion criterion was that the term "social innovation" or "social enterprise" was mentioned in the abstract, not just in the title or in the keywords. From the abstract, it needs to be evident that the study focuses on social innovation. During the full-text reading, we used 3 inclusion criteria, from which at least one had to be fulfilled. First, the study needed to focus on social innovation, which could also include social enterprise. Second, the study needed to point to the relationship between public actors and SI. The third criterion was

that the study needed to contribute to the understanding of basic concepts (derived from the literature on governance capacity) with respect to SI.

As the aim of the literature analysis is to develop a framework for analyzing governance capacity of public actors for social innovation, the meta-ethnographic approach (Britten et al., 2002; Campbell et al., 2003; Graham et al., 2006; Noblit and Hare, 2017) was suitable for conducting the analysis of included studies. Meta-ethnography is a "synthesis method aimed to uncover a new theory to explain the range of research findings encountered. It is a way of re-analyzing and comparing the texts of published studies (rather than the original data of each) to produce a new interpretation. The approach involves induction and interpretation in which separate parts are brought together to form a "whole" (i.e. looking for new theory or 'line of argument' to explain all the studies) so that the result is greater than the sum of its parts." (Graham et al., 2006, p. 12).

For the synthesis of studies on governance capacity, we used a line of argument analysis, as a meta-ethnography method that involves building up a picture of the whole (i.e. culture, organization) from different studies (Straus et al., 2013). The line of argument analysis identifies the first-order concepts in the literature which are derived from primary qualitative research data. It also identifies the author's interpretations of concepts, which are the second-order constructs (Straus et al., 2013). We coded studies on governance capacity without predefined codes (open coding), which was suitable for the exploration of the studies. In this way, we were able to distinguish among data authors used in the studies (1st order constructs), and how authors interpreted this data referring to governance sub-capacities (2nd order constructs). We organized free codes of findings into preliminary themes that we include in the search for the literature on social innovation.

In the studies on social innovation, we focused on the public actors and their engagement in SI initiatives. In this way, we identified the activities[7] of public actors and based on that we identified their roles. Roles can be defined as "a set of recognizable activities and attitudes used by an actor to address recurring situations" Wittmayer et al. (2017, p.51). After the identification of roles, we conducted qualitative content analysis and coded the studies according to the themes from the literature on governance capacity. Qualitative content analysis, which is a technique for the systematic analysis of texts that besides explicit content addresses also the themes and core ideas in analyzed texts (Mayring, 2014, 2000a). Although

[7] Activities – doing of the actors; actions or inactions undertaken by actors.

we used the themes from the 1st step of literature analysis, we stayed open for the new ones. Examples of new themes that emerged were friendship relationships or solidarity. In the end, we synthesized the data from both fields to obtain our 'analytical' constructs (3rd order constructs). For data extraction and analysis, we used software for qualitative data analysis (NVivo).

2.4 Results

Within the results section, the first sub-section is dedicated to the studies on governance capacities, while the second sub-section presents findings from the studies on SI included in the analysis.

2.4.1 Studies on governance capacity

The oldest study on governance capacity we included in the analysis was from 1994, while 10 studies (52.6%) were published in the period 2011 – 2016. From 19 studies on governance capacity, 17 (89.5%) were journals articles, 1 (5.3%) was a book chapter and 1 (5.3%) was a technical report. All 17 journal articles were subject to the peer review process, whereas 13 (68.4%) articles belonged to the impact factor journals. From 19 studies, 11 (57.9%) specified research design, methodology, and methods, whereas 8 studies (42.1%) did not. For studies without specified research design and methodology, we derived conclusions about methods and data used based on the full-text reading. 14 studies out of 19 (73.7%) presented empirical research, and 5 (26.3%) were theoretical studies with empirical examples. From 14 empirical studies, 9 used qualitative methods (64.3%), 4 applied mixed methods (28.6%), and 1 deployed a quantitative method (7.1%). Except for one quantitative study that used descriptive multivariate clustering, all other empirical studies deployed case study design: 8 used single case study design (57.1%), and 5 applied multiple case study design (35.7%).

Constructs of governance capacity

Studies on governance capacity addressed a variety of topics ranging from information technology to natural resource management. Each study provided a different definition of governance capacity. We present definitions from the 19 studies we analyzed in Table 4.

Table 4. Definitions of governance capacity

No	Authors	Governance capacity definition
1	Arts and Goverde, 2006	"…the extent to which new forms of governance are able to successfully diminish or solve societal and administrative problems (Nelissen et al. 2000)" p.75

2	Barbaroux, 2012	"…the capability of the organization to align product and organization in a dynamic way" p. 232
3	Christensen et al., 2016	"…formal structural and procedural features of the governmental administrative apparatus but also informal elements, that is, how these features work in practice." p.888
4	Čolić, 2014	"…characterized by collective action and interaction of different actors, using the knowledge and professional competence of all actors in problem-solving or management of possible options." p.46
5	Dang et al., 2016	"… the ability of societal actors to work together in order to solve collective problems (Ahrens, 2000; Graham and Fortier, 2009; Knill and Lehmkuhl, 2002; Nelissen, 2002)." p. 1155
6	Dewulf and Termeer, 2015	"…the ability of policymakers to observe wicked problems and to act accordingly, and the ability of the governance system to enable such observing and acting' (Termeer et al. 2013a)." p. 761
7	Frischtak, 1994	"…the ability to coordinate the aggregation of diverging interests and thus promote policy that can credibly be taken to represent the public interest." p.vii
8	Gissendanner, 2004	"…the ability to act at all, given barriers to action." p.45
9	González and Healey, 2005	"… the ability of the institutional relations in a social milieu to operate as a collective actor." p. 2056
10	Horigue et al., 2016	"… the ability to govern interactions of social, economic, and political processes and dynamics within a given political unit." p.73
11	Hughes et al., 2017	''…the levels of inter-organizational trust and open communication both within government and in the NGO community; and adequate fiscal system to fund programmes and projects within and outside government'' p.230
12	Johnson, 2010	"…the capacity of the governing system to effectively use governance interactions to cope with challenges and create opportunities in a system to be governed." p.267
13	Knill and Lehmkuhl, 2002	"…the formal and factual capability of public or private actors to define the content of public goods and to shape the social, economic, and political processes by which these goods are provided." p.43
14	Lafortune and Collin, 2011	"…the capacity to initiate and to offer a collectively discussed and defined solution to the metropolitan stakes affecting a region'' (Lafortune 2010: 22)." p.402
15	Marot, 2010	"…the capability of a municipality to adapt to new obligations

		and conditions." p.132
16	Mees and Driessen, 2011	"…the degree to which a public-private network of actors is able to resolve societal issues, in particular, climate-adaptation issues." p.254
17	Nelles, 2013	"… the ability of actors in a city-region to recognize collective challenges and opportunities, assemble relevant actors, debate alternatives and secure agreement on solutions, and take collective action." p.1351
18	Pikner, 2008	"…the capacity to represent local interests outside and develop more or less unified strategies with private actors, the State, other cities and levels of government." p.213
19	van der Dool, Hulst and Schaap, 2010	"…the ability to get things done (see 'system capacity,' Dahl & Tufte, 1973)." p.552

Source: Own elaboration

The first distinctive feature of the definitions was the type of subject whose property is a governance capacity. One group of authors (Arts and Goverde, 2006; Christensen et al., 2016; Dewulf and Termeer, 2015; Johnson, 2010; González and Healey, 2005; and Dool, Hulst, and Schaap, 2010) defined governance capacity as a system property. They refer to the new forms of governance, the administrative apparatus, governing or governance system or social institutions. The other group of authors defines governance capacity more explicitly connecting it to the particular type of actors. That is how some authors referred to the organizations (i.e. Barbaroux, 2012; Hughes et. al, 2017.), others to municipalities, cities or regions (i.e. Marot, 2010; Lafortune and Collin, 2011), while most of the authors more broadly to public or private actors and their networks (Knill and Lehmkuhl, 2002; Dewulf and Termeer, 2015; Čolić, 2014; Dang et al., 2016; Pikner, 2008; Nelles, 2013; Mees and Driessen, 2011). Lastly, a few authors (Frischtak, 1994; Gissendanner, 2004) defined governance capacity without the specification of the subject in the definition.

The second distinctive feature of all definitions was that the governance capacity has to do with the activity of the subject. This activity was related to the meaning of governance itself. For most of the authors (Arts and Goverde, 2006; Dewulf and Termeer, 2015; Johnson, 2010; Čolić, 2014; Dang et al., 2016; Nelles, 2013; Mees and Driessen, 2011; Lafortune and Collin, 2011) governance capacity was related to the problem-solving ability of the subject regardless of the type. Depending on the authors, this problem-solving capacity was connected to different aspects of governance, ranging to collective action (i.e. González and Healey, 2005; Dang et al., 2016), public goods and services (i.e. Knill and Lehmkuhl, 2002, Pikner, 2008), financing

and cooperation (i.e. Hughes et al., 2017), to governance interactions (i.e. Johnson, 2010, Horigue et al., 2016).

We found that the differences in two distinctive features of the definitions originate in the different theoretical stances of the authors, and further reflect on the operationalization of governance capacity. That is how 10 studies further operationalized governance capacity by using other capacities (i.e. institutional capacity, learning capacity, etc.), to which we refer from now on as governance sub-capacities (Annex A *Identified governance sub-capacities (2nd order constructs)*). We treated identified governance sub-capacities as 2nd order constructs as they represent the authors' interpretations of data from the studies (in empirical studies) or concepts (in theoretical studies). Sub-capacities were further divided into dimensions or elements, which we treated as 1st order constructs. For each 1st order construct, we identified the predominant theme (Annex B1 ***Themes derived from 1st order constructs***) that we further used for deducing the analytical concepts. Table 5 presents 18 identified sub-capacities (2nd order constructs) and 17 themes derived from 1st order constructs.

Table 5.Overview of the constructs of governance capacity

Theme / Sub-capacity	Governance principles	Coordination	Structures	Cultures	Financing	Learning	Resources	Congruence	Institutions	Adaptation	Participation	Planning	Performance	Actors	Leadership	Discourses	Context
Adaptive	x	x	x	x		x	x	x	x					x		x	x
Administrative	x						x	x	x			x	x	x			x
Analytical		x	x			x	x							x			x
Collaborative		x		x		x	x		x		x	x		x		x	x
Coordination		x	x			x	x	x	x	x		x		x			x
Delivery	x	x	x		x		x	x	x	x		x	x	x			x
Individual				x		x					x		x	x	x		x
Innovation		x	x		x	x			x					x			x
Institutional	x		x	x		x	x		x		x			x		x	x
Indicative	x						x	x	x					x			x
Integrative		x						x	x				x	x			x
Learning			x				x			x				x			x
Legal	x		x	x				x	x				x	x			x
Managerial							x		x	x	x	x	x	x			x
Organizing			x		x		x		x		x	x	x	x			x

Policy	x	x	x	x	x			x	x		x	x	x	x	x		x
Political	x	x	x	x			x	x	x		x		x	x	x	x	x
Performative	x						x	x					x	x		x	x
Regulation	x			x				x	x					x			x
Resource	x		x		x	x			x					x			x
Relational		x	x	x				x						x			x
Strategic		x	x	x			x	x	x				x	x		x	x

Source: Own elaboration

A preliminary synthesis of governance capacity constructs

Based on identified themes and sub-capacities we derived 4 common analytical concepts (agency, relational structure, institutions, context), and 4 sub-capacities (analytical, coordination, delivery, and regulatory), while we left other themes (under the label uncategorized) and sub-capacities to settle in their place after analyzing the literature on social innovation. This was done with the purpose of capturing specificities of the SI process.

As we can notice from Table 5, one group of themes includes broad, general themes such as actors, structures, institutions, and context, that we perceive to be a constituent of a social system (DiGaetano and Strom, 2003; Fleetwood, 2008).

a) Actors

Starting from the actors, we noticed several different types (e.g. individuals, policymakers, societal actors, organizations, administrative apparatus, etc.). All these actors are agents, as the agency is characterized by the capacity of an actor for intentional acting within and against social structures (Bandura, 2001; Emirbayer and Mische, 1998; Hewson, 2010; Sewell, 1992). Further on, we distinguish among individual human agency (i.e. individual actors) and collective agency (i.e. organizational actors). Individual human agency can be defined as "the temporally constructed engagement by actors of different structural environments-the temporal- relational contexts of action-which, through the interplay of habit, imagination, and judgment, both reproduces and transforms those structures in interactive response to the problems posed by changing historical situation" (Emirbayer and Mische, 1998, p. 970). Collective agency is an agency of an interrelated group of actors "exercised through socially coordinative and interdependent effort" (Bandura, 2001, p. 1).

Agents, no matter individual or collective "*are empowered to act with and against others by structures: they have knowledge of the schemas that inform social life and have access to some measure of human and nonhuman resources*" (Sewell, 1992, p. 20, italics added). To be able to make a distinction between analytical constructs of social structure, we turn to the themes of relational structure and institutions.

b) Relational structure

Fleetwood (2008) used term social structure pointing that social structure is a vague term, often confused with institutions. As we observed the same in the literature, we use the term relational structure, which is: "a latticework of internal relations between entities that may enable and constrain (but cannot transform) the intentions and actions of agents who draw upon, reproduce

and/or transform these relations" (Fleetwood, 2008, p.19). With this term, we denote a shared concept of relationships and networks (Fleetwood, 2008). In describing the actions of actors, studies referred to the relationships among actors, and how those relationships influenced the practices of the actors, and thus their capacities. Depending on the theoretical stand, the studies would refer from the "formal and informal linkages" (Barbaroux, 2012) and "interactions" (Johnson, 2010), over "networks and coalitions" (González and Healey, 2005) to "organizational structures"(Horigue et al., 2016).

c) Institutions

The theme of institutions was repeating throughout the analyzed studies, but with a different meaning. The studies that looked into governance capacity as a property of a "governance arrangement" structured so that it enables collaboration (Dang et al., 2015), or as "the ability of the institutional relations to work" (Gonzalez and Healey, 2005, p. 256). Throughout the studies, authors referred back to the rules (Frischtak, 1994; Mees and Driessen, 2011), and institutional arrangements (Horigue et al., 2016), legal security (Arts and Goverde, 2006; Dang et al., 2015). We follow Fleetwood (2008) in the understanding of institutions as the systems of established rules, conventions, norms, and customs. Institutions assist in rendering actors' intentions and actions. Actors draw upon, reproduce or transform institutions simultaneously reproducing and transforming themselves (Fleetwood, 2008).

d) Context

All studies referred to the context in which actors are embedded by describing the political, social, cultural, or economic environment. As context captures the relational structure of a social system in a given time. Context is, thus, relational and temporal. "While the temporal-relational contexts of action influence and shape agency and are (re)shaped by it in turn, the former is never so deeply intertwined with every aspect of the latter that these different analytical elements cannot be examined independently of one another " (Emirbayer and Mische, 1998, p. 962).

e) Sub-capacities

Traditional, hierarchical and authoritative modes of governing were referred to as government (Arts, 2014b). On the contrary, new modes of governance implied regulation of social behavior through networks and not solely through hierarchical mechanisms (Fukuyama, 2016). Thus, governance capacity has to do with the ability of public actors to steer society using new modes of governance. For this reason, the public policy perspective makes an appropriate stand for

aggregating identified sub-capacities. Taking the public policy perspective, we distinguish among delivery, regulatory, coordination and analytical sub-capacity (Lodge and Wegrich, 2014). Delivery capacity is the ability of actors to fulfill their tasks, no matter if those are delivering policies and laws, or providing particular products or services. Lodge and Wegrich (2014, p.11) see delivery capacity as the ability to 'make things happen'. To deliver results public actors need an analytical capacity to analyze information, make decisions and provide advice on problems or policy measures. They need their professional knowledge, skills, and expertise (Parrado, 2014). Furthermore, they need to coordinate action among other actors and themselves. Coordination capacity has to do with the execution of the organization of a given action. It is not just an ability to hierarchically impose ways of 'working together', but it is about the non-hierarchical facilitating role (Wegrich and Stimac, 2014). Regulatory capacity is the ability of public actors to regulate the behavior of other actors. Ultimately, regulation has to do with control, monitoring, oversight, and auditing (Wegrich, 2014). Regulatory capacity can be observed as potential capacity (in a sense what regulations allow actors to do), but also as a performative capacity – what actors did, and if their actions are perceived and accepted as legitimate. Regulatory capacity is thus having to do with the governance of the social system itself and the concepts of power and justice of governing and the governed. As such, regulatory capacity is tightly connected with underlying principles of democratic neoliberal society, such as accountability, transparency, legitimacy, fairness, etc.

Another group of themes corresponded to the identified governance sub-capacities. Those themes include resourcing, adaptation, financing, participation, planning, and learning. As those themes are related to the acting of the subjects, we aggregated them to the relevant sub-capacity (Annex B2 Aggregated themes into analytical constructs). For example, themes resourcing, and financing would both fall under the resourcing sub-capacity, participation theme corresponds to collaborative sub-capacity, planning could be included in organizing, managerial or analytical sub-capacity, etc.

2.4.2 Social innovation studies

Studies on SI (21) that we included in the analysis were published between 2005 and 2017, whereas 16 studies were published between 2012 and 2017. All analyzed studies were articles published in the impact factor journals. From 21 studies, 16 (57.9%) specified research design, methodology, and methods. 14 studies out of 21 (73.7%) presented empirical research, and 7 (26.3%) were theoretical studies with empirical examples. From 14 empirical studies, 11 used qualitative methods (64.3%), 2 applied mixed methods (28.6%), and 1 deployed a quantitative

method (7.1%). Two mixed-method studies applied meta-analysis of existing data, whereas all qualitative studies deployed case study design: 6 used single case study design (57.1%), and 5 applied multiple case study design (35.7%).

Public actors and social innovation initiatives

Within the sub-set of SI studies, we focused on the identification of the roles and activities of public actors in SI. We identified 13 different activities and the roles of public actors, making a distinction if public actors act as external or internal agents of SI initiatives (Table 6).

Table 6. Activities and roles of public actors in social innovation initiatives

Activity	**Organizational role of public actor**	**SI agents**
Initiating	The actor was involved in raising the action to start the initiative	Internal
Creating Contacts & Networking	The actor was involved in interacting and developing contacts for the initiative.	Internal
Persuading & Lobbing	The actor was involved in trying to influence the community members, influential persons, and officials with respect to the initiative	Internal
Planning	The actor was involved in making plans about the activities required to achieve the goal of the initiative	Internal
Coordinating & Organizing	The actor was involved in organizing people, groups, or organization to work together in the initiative activities	Internal
Advising	The actor was offering suggestions about the best course of action for the initiative	Internal
Administrating	The actor was involved in administrative procedures needed for managing the initiative (e.g. registration documentation)	External or internal
Financing	The actor was providing funding for the initiative	External or internal
Providing Infrastructure	The actor was providing basic structures and facilities (e.g. buildings, mechanization) to the initiative	External or internal
Providing Other Resources	The actor was providing natural (e.g. land, forests) or human resources needed for the initiative	External or internal

Awareness Raising & Informing	The actor was involved in communicating information to increase levels of awareness about the initiative	External or internal
Marketing & Promoting	The actor was publicly supporting or actively encouraging and promoting the activities of the initiative	Internal
Regulating & Monitoring	The actor was involved in regulating and overseeing the initiative's activities by means of laws and regulations	External or internal

Source: Own elaboration

We found out that public actors might act as external or internal agents in SI. Public actors as external agents are influencing SI initiatives through shaping the context in which SI initiatives develop (Figure 2), without being directly involved in the SI initiative. For example, by creating a social enterprise policy, public actors might prescribe criteria for registering SE. This criterion can enable some SI initiatives to register as SE, while it can hinder other SI initiatives to do the same.

Seven studies (see Berkes and Adhikari, 2006; Chalmers, 2012; Lang et al., 2015; Marohabutr, 2016; Vickers and Lyon, 2014; Bacq and Eddleston, 2016; Eriksen and Selboe, 2012) stressed that public actors on the national and regional administrative levels influence social innovation by creating enabling or constraining conditions (the context) in which the social innovation initiative develops. "Clearly, the state and its agencies were playing a key role in most of the study cases in terms of creating and shaping ESE [environmentally-motivated social enterprises] institutional contexts and (quasi-)markets through regulation, commissioning and policy towards enterprise support" (Vickers and Lyon, 2014, p. 466). Thus, even if not involved in the social initiative directly or even unaware of their influence on social innovation, public

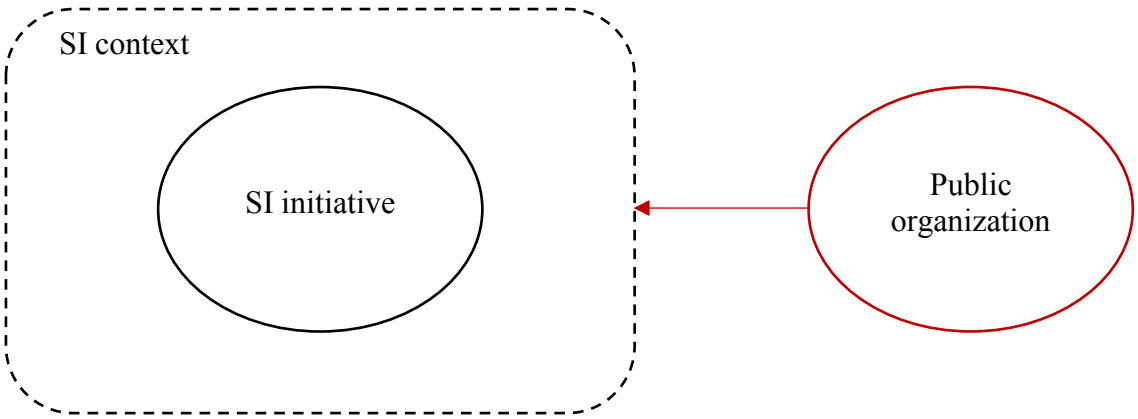

Figure 2. Public actors as external agents of social innovation (Own elaboration based on analyzed social innovation studies)

actors - as an external agent - are influencing (if not determining) policy, economic and social context (SI context) in which SI initiatives develop.

As internal agents of SI, public actors are directly involved in the activities in SI initiatives (Figure 3). When directly involved in the activities of SI, public actors become a part of a new, collective SI agency, while staying attached to their professional organization (see Baker and Mehmood, 2013; Berkes and Adhikari, 2006; Campos et al., 2016; Harrisson et al., 2012; Hatzl et al., 2016; Lang et al., 2015; Rao-Nicholson et al., 2017; Ridley-Duff, 2008; Steinerowski and Steinerowska-Streb, n.d.; Swyngedouw, 2005). This puts public actors in a unique position of balancing on the intersection of two, often contrary worlds: the one of state hierarchical authority and the one of collaborative and networked social innovation. "These innovators interpreted and reconciled the two contradictory representation models based on the well-known traditional role and the new role to be constructed" (Harrisson et al., 2012, p. 14).

Public organizations are directly involved in SI initiatives through their representatives – individual public actors. Six studies (see Cieslik, 2016; Dey and Steyaert, 2014; Harrisson et al., 2012; Moore and Westley, 2011; Ridley-Duff, 2008; Tukamushaba et al., 2011) addressed the importance of individuals' personal background, skills, and traits in balancing among two different worlds. Those studies emphasized the importance of persons' reflexivity, creativity and risk aversion in strategic decision making. "Collective creativity is based on the experience and capacity for initiative of individuals with different attributes" (Harrisson et al., 2012, p. 13) Using their tacit knowledge, and organizational roles and drawing upon their personal traits, individual public actors act as a 'bridge' between the larger state apparatus and SI initiative, having in the same time the role in their respective organization (organizational role) and in

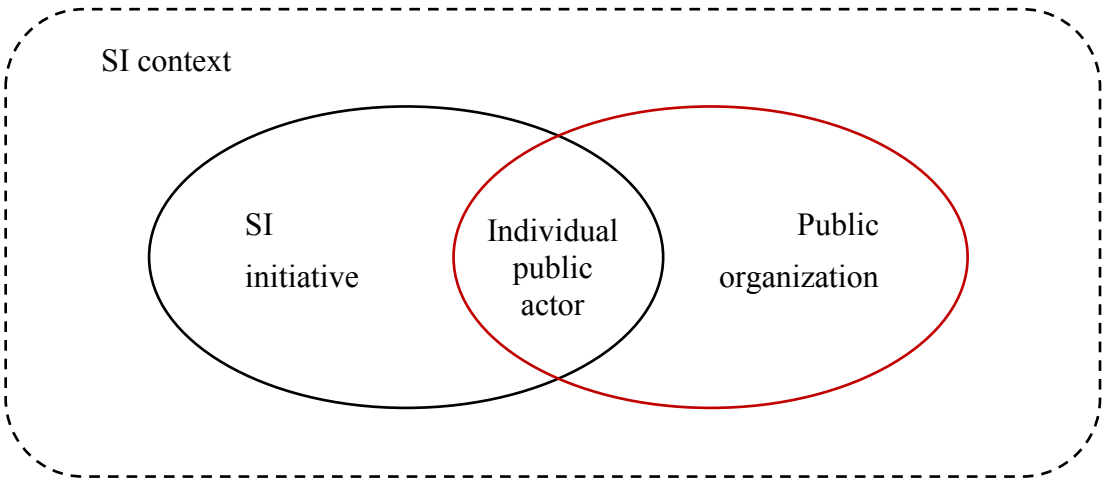

Figure 3. Public actors as internal agents of social innovation (Source: Own elaboration based on analyzed social innovation studies)

the SI initiative (SI role) (Figure 3). “They put together arguments based on the values, issues, and goals of their respective organizations that served to legitimize this organizational innovation” (Harrisson et al., 2012, p. 15)

‘Bridging’ position of individual public actors corresponds to the governance capacity theme of relational structures or *networks*, which we identified in 15 studies (see Berkes and Adhikari, 2006; Chalmers, 2012; Cieslik, 2016; Dey and Steyaert, 2014; Eriksen and Selboe, 2012; Hatak et al., 2016; Hatzl et al., 2016; Liu and Ko, 2012; Marohabutr, 2016; Moore and Westley, 2001; Ridley-Duff, 2008; Steinerowski and Steinerowska-Streb, 2012; Vickers and Lyon, 2014). “Networks that operate effectively to achieve change seem to have individuals who act as recharge points for others.” (Moore et al., 2011, p. 8). All those studies (both empirical and conceptual) reported that relations (both formal and informal) with public actors open access to information, knowledge and other resources, influencing learning processes crucial for success or failure of social innovation. “Finally, social innovators are failing to identify and gain access to the networks that will facilitate their success. This reduces exposure to valuable sources of knowledge that may subsequently feed into the social innovation process’ (Chalmers, 2012, p. 23).

Indeed, *knowledge and learning* were recognized as pivotal for SI processes by 10 studies (Berkes and Adhikari, 2006; Campos et al., 2016; Chalmers, 2012; Dey and Steyaert, 2014; Eriksen and Selboe, 2012; Harrisson et al., 2012; Liu and Ko, 2012; Moore and Westley, 2001; Rao-Nicholson et al., 2017; Vickers and Lyon, 2014). Those studies emphasized two aspects of knowledge and learning processes: one related to the knowledge of public actors about organizational rules and procedures, and the other related to public actors learning about innovative ideas of SI initiative. First, public actors’ knowledge about the organizational rules and procedures can help SI initiative to navigate institutional arenas in fulfilling its goals. “Above all, these [individual] actors knew their organization and its mission, and they knew how to work within certain parameters.” (Harrisson et al., 2012, p. 14, square brackets added for clarification). Second, learning about SI enables public actors to grasp new ideas or apply old ideas as new solutions. “Knowledge accumulation involves acquiring the expertise and skills related to executing critical tasks. It can be categorized into two approaches: exploration and exploitation. The former aims to capture new ideas whereas the latter intends to replicate the existing methods in new contexts for continuing improvement” (Liu and Ko, 2012, p. 588)

All studies refer to *deliberation*, while sixteen identified it as crucial for learning and success of SI (see Bacq and Eddleston, 2016; Baker and Mehmood, 2013; Berkes, 2007; Campos et

al., 2016; Cieslik, 2016; Dey and Steyaert, 2014; Eriksen and Selboe, 2012; Harrisson et al., 2012; Hatzl et al., 2016; Lang et al., 2015; Liu and Ko, 2012; Marohabutr, 2016; Moore and Westley, 2001; Rao-Nicholson et al., 2017; Steinerowski and Steinerowska-Streb, 2012; Vickers and Lyon, 2014). Learning occurs when public actors engage in the communicative process of exchange of ideas and objectives. Often, those ideas and objectives are contrary or even conflicting as actors are coming from different fields. "Deliberate efforts were therefore made to change cultural, economic, and policy institutions in the direction of support for the engagement of people with disabilities—seeking to generate new patterns of belief" (Moore et al., 2011, p. 7) To align diverging ideas and objectives, public actors have to confer, exchange views, reflect on matters of mutual interest, negotiate and attempt to persuade other SI agents and their respective organizations. "Thus, a deliberative governance process begins emerging as the different social actors, with particular interests, power relations, and available resources engage through interdependent processes of negotiation and collaboration" (Campos et al., 2016, p. 564).

Adaptation was another prominent theme recognized by 16 studies (Baker and Mehmood, 2013; Berkes, 2007; Campos et al., 2016; Chalmers, 2012; Cieslik, 2016; Dey and Steyaert, 2014; Eriksen and Selboe, 2012; Harrisson et al., 2012; Lang et al., 2015; Liu and Ko, 2012; Marohabutr, 2016; Moore and Westley, 2001; Rao-Nicholson et al., 2017; Ridley-Duff, 2008; Steinerowski and Steinerowska-Streb, 2012; Vickers and Lyon, 2014). As SI is contingent on context, adapting and adaptive capacity are crucial for finding custom solutions when faced with sudden problems (Baker and Mehmood, 2013; Rao-Nicholson et al., 2017). Adaptation is about a quick responding and being flexible and resourceful in the situations not encountered before (Liu and Ko, 2012). Adaptability takes flexibility to modify behavior (Eriksen and Selboe, 2012) according to the current situation when evaluating and deciding on future options and coping strategies (Campos et al., 2016).

2.5 Discussion

The studies on governance capacity did not provide one common definition of what governance capacity is, and what comprises it. For some authors it was a property of a system (Arts and Goverde, 2006; Christensen et al., 2016; Dewulf and Termeer, 2015; Johnson, 2010; González and Healey, 2005; and Dool, Hulst, and Schaap, 2010), for others of a particular actor (Barbaroux, 2012; Hughes et. al, 2017; Marot, 2010; Lafortune and Collin, 2011; Knill and Lehmkuhl, 2002; Dewulf and Termeer, 2015; Čolić, 2014; Dang et al., 2016; Pikner, 2008; Nelles, 2013; Mees and Driessen, 2011). Furthermore, for some authors governance capacity

was about solving problems, for others it was the ability to act, while for some it was about governing interactions. In general, governance has to do with delegation of authority and power (and with it responsibility, accountability and legitimacy) from state to non-state actors and collaborative efforts in steering the society and providing public goods and services (Bevir, 2010; Fukuyama, 2016; Loe et al., 2009; Rhodes, 1998). Thus, the definition of governance capacity and its operationalization depend on the field of the study (i.e. political science, organizational science, environmental science) and the authors understanding of what governance is. Ambiguousness of governance concept increases the complexity of the analysis and create conditions of various interpretations of what are the crucial governance capacities. If the governance capacity is not defined and deconstructed into specific sub-capacities to be analyzed, it is hard to identify why a public actor might not be effective, or inefficient. This, in turn, makes it more difficult to find out what changes can be introduced for increasing governance capacity.

Social innovation initiatives often represent 'governance-beyond-the-state'(Swyngedouw, 2005). SI initiatives include various actors (civil, market, and public) connected into a network, which are perceived to be more efficient in governing then traditional hierarchical state apparatus. SI initiatives are "presumably horizontal, networked and based on interactive relations between independent and interdependent actors who share a high degree of trust, despite internal conflict and oppositional agendas, within inclusive participatory institutional or organizational associations" (Swyngedouw, 2005, p. 1925). Decision making and acting in SI initiatives is based on deliberation and collaboration among those various actors (Berkes and Adhikari, 2006; Chalmers, 2012; Cieslik, 2016; Dey and Steyaert, 2014; Eriksen and Selboe, 2012; Hatak et al., 2016; Hatzl et al., 2016; Liu and Ko, 2012; Marohabutr, 2016; Moore and Westley, 2001; Ridley-Duff, 2008; Steinerowski and Steinerowska-Streb, 2012; Vickers and Lyon, 2014). For purposes of our analytical framework, we conceptualize governance capacity of public actors for SI as the ability of public actors to govern by engaging in social relationships and collaborations with civil society and market actors to steer social, economic and environmental changes, and collectively solve problems (based upon Arts and van Tatenhove, 2006; Dang et al., 2015; González and Healey, 2005). This means that public actors have the ability to move away from their mandated steering roles towards deliberative engagement in reconfiguring of practices.

Taking the public policy perspective, we distinguished among four organizational or domain-wide sub-capacities: delivery, regulatory, coordination and analytical sub-capacity, as those are

”central to any attempt of problem-solving” (Lodge and Wegrich, 2014, p. 10). From the literature, on SI we add four more sub-capacities – resource, adaptive, deliberation, and learning sub-capacity, which are crucial for SI.

Delivery capacity is the ability of public actors to ability to ‘make things happen’ (Lodge and Wegrich, 2014). It is related to resources needed for fulfilling the tasks mandated by the state (i.e. provisioning of public services, extraction of revenues, etc.). SI studies pointed to the importance of access to resources for the success of the SI initiative. Not only that financial resources matter, but also human, infrastructural and knowledge resources are pooled together in SI activities (Bacq and Eddleston, 2016; Hatak et al., 2016; Moore and Westley, 2001; Ridley-Duff, 2008; Vickers and Lyon, 2014). This ability of public actors to identify, access, utilize and transfer necessary resources (tangible and intangible) constitutes the resource capacity of public actors for SI.

Closely connected with delivery capacity is regulatory capacity, which is the ability of public actors to regulate the behavior of other actors (Lodge and Wegrich, 2014). It is related to delegation of power and with underlying principles of democratic neoliberal society, such as accountability, transparency, legitimacy, fairness, etc. “It concerns citizens’ perceptions of whether the actions of the authorities are desirable, proper, or appropriate within certain socially constructed systems of norms, values, and beliefs” (Christensen et al., 2016, p. 887). To achieve power delegation from the state to non-state actors in the SI initiative, engagement of public actors in the SI initiative has to be voluntary and based on the deliberation. This ability of public actors to engage in communicative relationships of interest negotiation constitutes the deliberative capacity of public actors. Deliberative capacity is about the way actors “confer, ponder, exchange views, consider evidence, reflect on matters of mutual interest, negotiate and attempt to persuade each other through communication processes” (Shannon, M.A. cited in Finger-Stich, 2005, p. 253).

Further on, public actors need coordination capacity to coordinate action among other actors and themselves. It is not just an ability to hierarchically impose participatory procedures, but it is about the non-hierarchical facilitating role (Christensen et al., 2016; Lodge and Wegrich, 2014). Trough deliberation, public actors exchange attitudes, beliefs, expectations, and perceptions with other agents, and in this way, they get to know each other – they engage in social and organizational learning (Shannon, 1989). Not only that they express their positions based on their beliefs, interests, and motivation, they also learn about the other actors and their respective organizations. Deliberative interaction allows actors to familiarize themselves with

the tacit knowledge of other involved actors (Harrisson et al., 2012). The ability to public actors to recognize, acquire, and use existing or modify new knowledge represents the learning capacity of public actors.

Finally, public actors need an analytical capacity to analyze information and making decisions on how to act with respect to SI. In making decisions public actors need to respond and adapt to changing conditions and new needs of SI initiatives, accommodating the organizational and SI objectives. They need to act flexibly to take advantage of opportunities the SI initiative is pursuing. This ability of public actors to respond and adapt to changing conditions by acting flexibly is the adaptive capacity.

To better understand relations among sub-capacities, we return to 4 basic constructs (agency, relational structure, institutions, and context) to make the basis of our analytical framework (Figure 4).

As we understand governance capacity to be an agential property, we operationalized agency trough concepts of individual actors, public organizations (organizational actors), SI initiative, role, and capacities. Under public actors we understand all those organizations and individuals acting on the behalf of a governmental body (Aurenhammer et al., 2018; Sciarelli and Rinaldi, 2016; Knoepfel et al., 2013). From the literature on SI, we learned that public organizations, as well as individuals employed by those organizations, are crucial for SI. That is why in the center of our framework we position individual public actors, as an internal agent of SI.

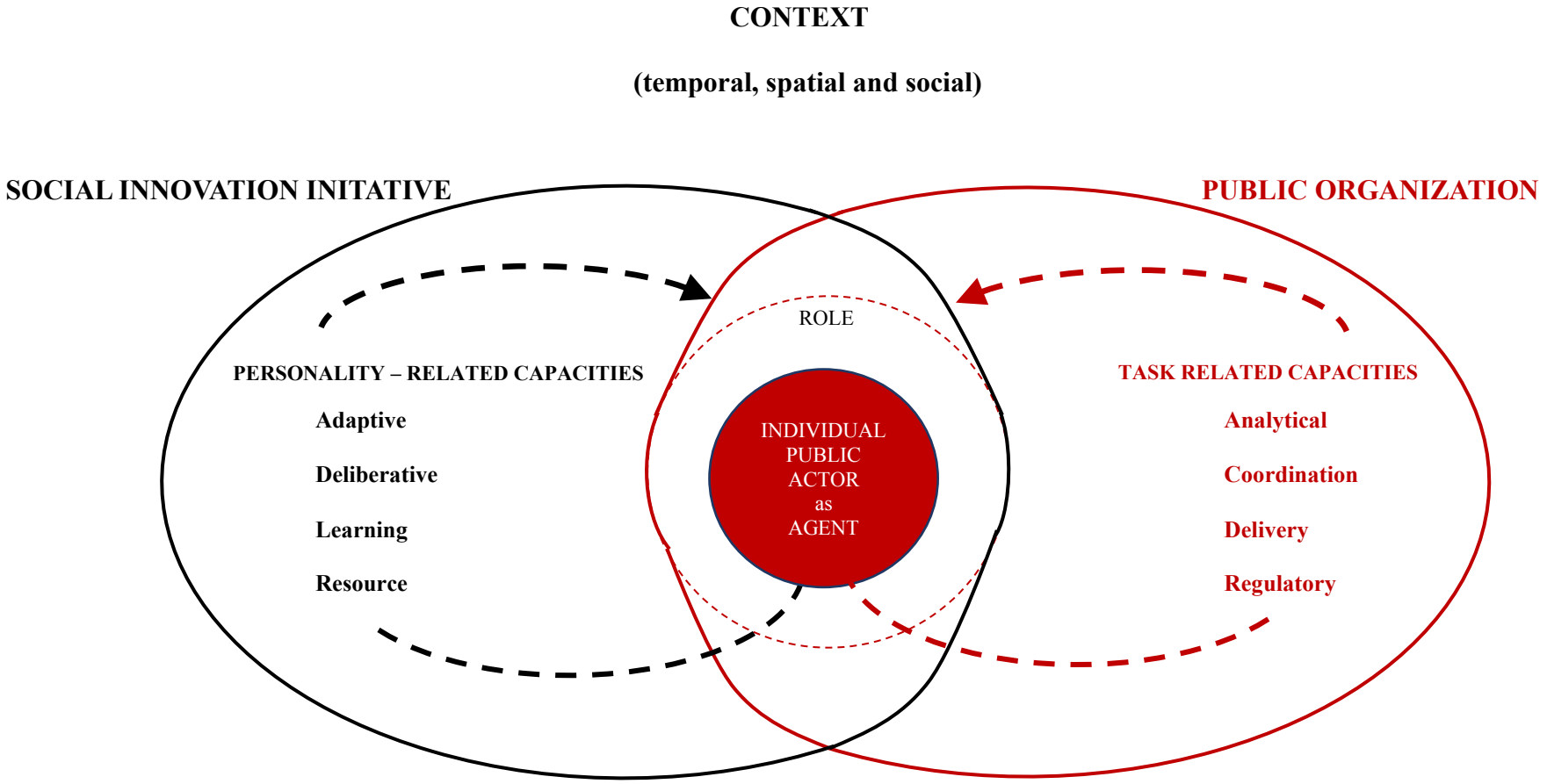

Figure 4. Analytical framework for analyzing governance capacities of public actors for social innovation (Own elaboration)

Individual public actors are employees of public organizations that perform administrative, financial, managerial, and other tasks. As individual public actors act on the behalf of public organizations they are the proxy agents of organizations (Bandura, 2001; Hewson, 2010, p. 13). As proxy agents, they have a certain organizational role (e.g. manager, forester, director). Organizational roles bring a set of certain resources, responsibilities, and obligations prescribed by an organization. In fulfilling their organizational roles, individual public actors are bounded by those organizational duties and responsibilities. To fulfill their organizational role, public actors analyze information, coordinate their actions, and deliver results using their task-related capacities – analytical, coordination, regulatory and delivery.

When involved in SI activities, individual public actors are not only acting as proxy agents of their organizations. Individual public actors are first of all human beings, with their own intentionality, motivations, ways of thinking and skill set. Thus, each individual actor will act in its own way exercising direct personal agency (Bandura, 2001; Emirbayer and Mische, 1998). This means that individual public actors can act outside of the normal bounds of organizational duty and responsibility, but usually not fundamentally against established rules of what is expected and required. In this exercising of direct personal agency, individual public actors can use their organizational role as a resource in a creative way to engage in SI initiative and support its goals.

We operationalize constructs of relational structure and institutions using the concept of role[8]. As the role is the concept that bridges the individual and society, it establishes a shared understanding to which actors refer offering a connection to the social structure (Lynch, 2007; Wittmayer et al., 2017b). Thus, using the concept of roles, it is possible to investigate how individual public actors interpret their responsibilities and duties in such ways that lead to initiating and supporting SI initiatives.

Within sociological role theories, there are two ontologically opposing perspectives: structuralist and interactionist, while the perspective on a role as a resource represents the third and intermediary one (Baker and Faulkner, 1991; Callero, 1994; Lynch, 2007; Wittmayer et

[8] In Study 2: Roles of public actors in social innovation initiatives in marginalized rural areas we further explore organizational role of public actors in SI initiatives. In Study 3: Role of public actors in the forest-based social innovation - The case of the Charcoal Land initiative in Slovenia, we use the concept of the role for understanding when a public actor interprets their engagement as supporting the public and collective good and uses the organizational role in new ways and with innovative activities and relationships.

al., 2017a)[9]. The role as a resource perspective views the role as 'a vehicle for the agency' (Baker and Faulkner, 1991; Callero, 1994), regarding them as 'cultural objects' that have "practical, as well as symbolic reality" (Callero, 1994, p. 232). Not only that roles emerge from the existing social structures (symbolic reality), they also serve to create new social structures (practical reality).

We follow the role as resource perspective, as it distinguishes between two facets of public actors' role: 1) the type of role, and 2) the use of role (Callero, 1994). The type of role is related to the "…["]virtual" level of reality in a manner consistent with structural schema" (Callero, 1994, p. 235), meaning that the type of role (e.g. forester, professor, mayor) is generally accepted and legitimized by society; it is embedded in the existing relational structures and conditioned by existing institutions. Some individuals that take part in the SI initiative are employees of public organizations. They are the proxy agents, already having a certain role within their organizations (e.g. forester employed by State Forest Service). We call these role types - *organizational role*, as with them they bring a set of certain resources, responsibilities, and obligations prescribed by an organization, and generally accepted by the society. Moreover, they are also followed by a certain understanding of the society of how an individual actor with certain organizational roles should and should not act, being connected with symbolic reality (see Callero, 1994).

The use of role is related to "the practical accomplishments of role use, and in this sense serves as a basis for the understanding agency in role enactment" (Callero, 1994, p. 238). Individual public actors are first of all human beings, with their own intentionality, motivations, and ways of thinking. Each individual actor will act in its own way, exhibiting a direct personal agency (Bandura, 2001; Emirbayer and Mische, 1998). Besides exercising direct personal agency, individual public actors can behave simultaneously as a proxy agent. They can use their organizational role for gaining access to cultural, social or material capital when they need it to purposefully achieve their goals (Baker and Faulkner, 1991; Callero, 1994). This implies that the public actors act both as direct personal agents, and as proxy agents by purposefully using their organizational role to achieve a political end of creating new social positions, and

[9] Structuralist perspective emphasizes the constraining and deterministic features of roles as part of a social structure, as it considers that individuals can only take and play already existing roles (see Linton, 1934). Interactionist perspective also regards the role as emerging from the social structure, although it allows more freedom to the agency by focusing on creative and independent role-making by individuals (see Turner, 1990).

modify social structures by creating new networks, new organizations or new governance arrangements.

Finally, as SI is contingent on context, we place our analytical framework within the spatial, temporal and social context. “Actors per se are much more than, and [simultaneously] much less than, 'agents' [alone]. All social action is a concrete synthesis, shaped and conditioned, on the one hand, by the temporal- relational contexts of action and, on the other, by the dynamic element of the agency itself. The latter guarantees that empirical social action will never be completely determined or structured” (Emirbayer and Mische, 1998, p. 1004).

By using the concept of role, we tried not to enter the disputable question of agency and structure. With our framework, we intend just to highlight analytical elements that could further guide the practical investigation. As the purpose of our analytical framework is to facilitate our future data collection and analysis, with it we are making an artificial distinction among constructs of the social system (agency; relational structure, institutions). The concepts we use (actors, capacities, context, role) operationalization of constructs of agency, relational structures, and institutions. Concepts of actors, capacities, context, role are distinguishable so as to facilitate empirical data collection, and broad enough to give flexibility in data interpretation. For that reason, the elements of the framework should be understood as a relational dynamic, and not as a static, individual property of SI phenomena.

2.6 Conclusions

With this study, we conceptualize the governance capacity of public actors for social innovation as their ability to move away from their mandated steering roles towards deliberative engagement in reconfiguring of practices. We proposed the framework for analyzing the governance capacity of public actors for social innovation. The framework is based on four basic analytical concepts - agency, relational structure, institutions, and context. Agency is operationalized trough actors, as they are the agents with the vested ability to do and act. Within the actors, we distinguished among individual and organizational public actors and SI initiatives. Individual public actors act as a bridge between their respective organizations and the SI initiative. For fulfilling their mandated tasks and responsibilities public actors need task-related governance sub-capacities –analytical, coordination, delivery and regulatory.

As individual public actors are balancing between the state apparatus (their organization), and the other of social innovation, besides their task-related capacities they need another set of sub-capacities for engaging in SI initiative. For being internal agents of SI public actors use the

resource, learning, deliberative and adaptive capacity which we call personality-related governance capacities. Task-related and personality-related governance sub-capacities are not static and independent, as they are contingent on the spatial, temporal and social context in which SI initiatives act.

III. RESEARCH DESIGN AND METHODOLOGY

This chapter first outlines the overall research design (Section 2.1), followed by a brief presentation of the methodology and methods (Section 2.2), as those are elaborated within corresponding articles. Finally, this chapter presents connections among different components of the research (Section 2.3) linking them back to the research objectives and questions.

3.1.Research design

This research used the mixed-method approach, as it was the most suitable for a coherent combination of different phases of the research. According to Creswell (2009, p.4) mixed method "… [I]nvolves philosophical assumptions, the use of qualitative and quantitative approaches, and the mixing of both approaches in the study. Thus, it is more than simply collecting and analyzing both kinds of data; it also involves the use of both approaches in tandem so that the overall strength of a study is greater than either qualitative or quantitative research."

The topics of governance capacity for social innovation are typical of sociological and political sciences and are mostly studied by using qualitative studies. By using mixed-method qualitative findings can be strengthened and validated by using measurable aspects of quantitative methods such as statistical analysis. In this research, quantitative, statistical methods are suitable for exploring the roles and influence of public actors in social innovation initiatives. Qualitative, sociological methods are more appropriate for an in-depth understanding of the governance capacities within the particular context of the social innovation initiatives.

When planning a mixed methods study there are several criteria that should be taken into account: *design, approach, level of interaction, priority (weighting), timing, and procedures for mixing the strands*. "A strand is a component of a study that encompasses the basic process of conducting quantitative or qualitative research: posing a question, collecting data, analyzing data, and interpreting results based on that data" (Creswell and Plano Clark, 2011, p.63).

Mixed methods designs can be fixed or emergent, but often they cannot be clearly separated, so the combination of both designs is present in the study. Fixed design is a design where the use of both methods is planned at the start of the research. Contrary, in emergent design, at the begging of the study the use of only one method is planned, and later, during the study, the need develops for use of another method (Creswell and Plano Clark, 2011). At the beginning of this research, only an in-depth case study was planned for the exploration of the governance

capacity of public actors for SI. As the need for investigation of the influence of public actors' role in the development of SI initiatives emerged from the literature review and analysis, the decision for the use of the survey method was made in the second year of the research. Thus, this research belongs to emergent design.

Another criterion for planning a mixed-methods approach is the **level of interaction**. "The level of interaction is the extent to which the two strands are kept independent or interact with each other" (Creswell and Plano Clark, 2011, p. 64). This research is a case of independent strands, as data collection and analysis were done separately. Strands were brought together in the interpretation phase of the research.

Priority is the weighting of the importance of quantitative and qualitative methods for answering the research questions. The priority can be an equal, quantitative, and qualitative priority. It was planned that quantitative and qualitative data in this study have equal priority. As the sample size for quantitative data was insufficient for statistical data analysis[10], qualitative data have higher priority than quantitative.

Timing refers to the temporal relationship between both the collection and analysis of quantitative and qualitative strands within a study (Creswell and Plano Clark, 2011). Timing can be sequential, concurrent or multiphase. In sequential timing, strands are implemented in two separate phases, one after another. In a concurrent study, strands are implemented together in a single phase. Multiphase timing occurs when sequential and/or concurrent studies are combined in one program or project. This research has sequential timing since quantitative and qualitative sets were held separately.

Finally, **mixing** is a process of implementing independent or interactive relationships of the mixed methods study (Creswell and Plano Clark, 2011). For mixing strands, attention is given to the point of interface and mixing strategy. The point of interface represents the moment when mixing occurs. It can be done at four points during the research: interpretation, data analysis, data collection, and design. Mixing strategies are merging the two data sets, connecting from the analysis of one data set to the second data set, embedding one form of data in a larger design, and using a framework to bind data sets. This research used the connecting strategy during the interpretation phase to bring together insights into the roles and capacities of public actors together.

[10] For the reasons of low response rate, please see sub-sections 3.2.2 and 4.1.2

3.2.Methodology and methods

Having in mind a sequential mixed method design, this research was composed of 3 analytical and 1 connecting phase. Each phase was composed of several steps utilizing appropriate methods (Figure 5):

Phase I – Literature review and analysis (Steps 1 & 2)

Phase II – Survey (Step 3)

Phase III – Case study (Step 4)

Phase IV – Interpretation (Steps 5, 6 & 7)

3.2.1 Phase I: Literature review and analysis

Literature review and analysis composed the phase I of the overall research, that lasted from January 2017 until January 2018. As the last SCOPUS search performed on August 30, 2019, with the keywords "governance capacity" AND "social innovation" still resulted in 2 articles there was no single one theory, concept or framework that could guide this research. Thus, the first step necessary for exploring the governance capacity of public actors for forest-based social innovation was to identify elements, dimensions, or constructs that comprise it. For the identification of key constructs for the development of the analytical framework, I used a literature review and analysis. The methodological details of the literature review are in detail described in section II, sub-section 2.3. Literature review results in a draft analytical framework, which made a basis for the other two phases of research: survey and case study.

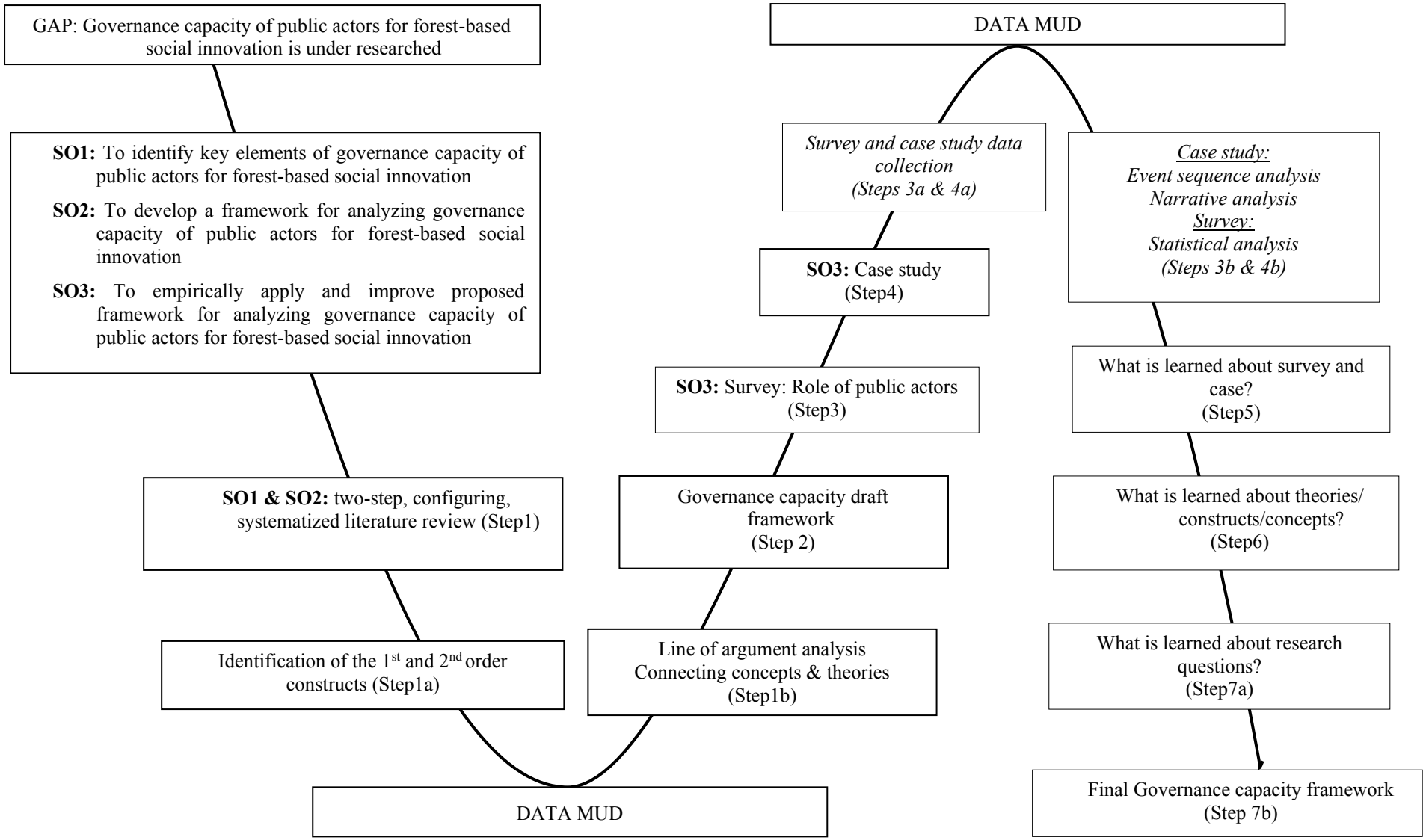

Figure 5. Research design (own elaboration adapted from Shannon (2010), based on Dewey (1938))

3.2.2 Phase II: Survey

The survey belongs to phase II of the overall Ph.D. research. It started in December 2018 and was planned to last until August 2019. As the details of the survey are in detail explained in section IV, sub-section 4.1.2 (Study 2: Roles of public actors in social innovation initiatives in marginalized rural areas - **Methods**), here I will just shortly reflect on the survey method and justification for its use.

The need for survey research emerged from the results of the literature analysis. Literature analysis pointed out that public actors do play multiple roles in SI initiatives and that many of those roles imply direct involvement of public actors in SI. Further on, the literature review results pointed out that public actors have an influence on SI initiatives. As an analytical framework was constructed based on these findings, the survey was intended to test if the roles of public actors influence SI initiatives.

The survey is the method used to gather information from a portion of a population of interest (sample size) depending on the purpose of the study with the aim to obtain a composite profile of analyzed the population (Stoop and Harrison, 2012, p. 8). It uses the standardized procedure, where every respondent is asked the same questions in the same way. The aim of the survey was to obtain information on the involvement, roles, and influence of public actors on forest-based SI initiatives. The details on the survey are provided in sub-section 4.1.2 and Annex C Survey ***on the roles of public actors in social innovation initiatives***

As there is no database on forest-based SI, I used the database from the project "Social innovation in a marginal rural area (SIMRA)", as it contains SI cases from marginal rural areas. 211 cases of SI initiatives from agricultural, forestry and rural development sector that were validated according to the definition of SI developed by Polman et al. (2017), that is also used in this research. Validation of SI cases was done by SIMRA partners. It included an assessment against 4 criteria:

1) "Is there a reconfiguration of societal practices (relationships/ collaborations/ networks/ institutions/ governance structures) in response to societal challenges?
2) Does the act of novel reconfiguration involve civil society members as active participants?
3) Does the novelty /reconfiguration take place in new geographical settings or in relation to the previously disengaged social group(s)?
4) Does it better meet social, environmental or economic aims/goals looking to improve societal wellbeing?" (Bryce et al., 2017, p. 8)

SI initiative had to fulfill all four criteria to obtain a positive validation. The validated cases were then compiled in an online database that is published on the SIMRA website (http://www.simra-h2020.eu/index.php/simradatabase/). As a courtesy of the SIMRA project, I obtained an Excel file that contained Id of SI initiative, name, short description, and country of the initiative. This file did not include the contacts of the initiatives, so for each initiative contacts (such as e-mail and web address) were searched by online navigation and manual search of the internet. Due to the late receiving of the Excel file (end of December 2018) and the long search for initiatives' contact (few months) the survey was launched at the beginning of July, leaving a relatively short window for initiatives to reply (2 months).

Unfortunately, until September 1st, 2019 response rate was only 12.4%. For that reason, a mitigation strategy for dealing with unsatisfactory survey results was applied. Obtained responses were used to conduct the basic descriptive statistics (i.e. frequencies), as to get preliminary insights if public actors were engaged in SI initiatives, what roles did they have and how they influenced it. Conclusions are derived based on the obtained survey results, case study, and conceptual considerations, with the caution that generalization is not possible due to the response bias. These results are presented in Section IV, sub-section 4.1.3 (Study 2: Roles of public actors in social innovation initiatives in marginalized rural areas).

The low response rate causes some limitations to the Ph.D. in terms of statistical significance. Regardless of the bias of current survey results, the quality of overall Ph.D. research is not compromised due to the in-depth case study done in complementarity with the survey. Due to the complete innovativeness of the topic under study (governance capacity for social innovation in forestry, the preliminary survey results together with the exploratory case study are valuable as they provided in rich data and novel findings on the role and importance of public actors in forest-based social innovation initiatives The survey method and design could still be used in future research, or for supporting possible future qualitative analysis of initiatives that responded. Of course, more empirical case studies, as well as quantitative analysis, are needed to refine this research results and provide better knowledge on the topic.

Also, the number of responses from Serbia is very high, so that data will be used in conjunction with qualitative interviews done by colleague Ivana Zivojinovic (BOKU), who is also working on a topic on SI in forestry- actors and institutions. Surveys' (from Serbian cases) and interview data will be analyzed within Ivana's Ph.D. at the beginning of 2020, and a scientific article is planned to be drafted afterward.

3.2.3 Phase III: Case study

The third phase corresponds to the case study, conducted from November 2017 to March 2019. Case study research method is "an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (Yin, 1984, p. 23). A single case study is the most appropriate method to study the same single case through time, as well as for studying the unique cases (Yin, 2009, pp. 46–51), such would be the cases of social innovation with very high involvement of public actors.

As social innovation is contingent on context in-depth exploration at the local level is suitable. As I was particularly interested in the forest-based social innovation initiatives in Europe, Slovenia was a reasonable choice. Slovenia is one of the most afforested countries in Europe, with a traditionally organized forest sector. The traditional organization of the Slovenian forest sector makes high involvement of public actors in the SI initiative an interesting case of collaboration. The case study area can be categorized as a marginalized rural area, rich with forest resources. It is located in central Slovenia, in the area of the village Dole pri Litiji. The location and characteristics of the case study area are in detail described in section IV, sub-section 4.2.1 (The case study area: Dole pri Litiji, central Slovenia), depicting the spatial, material and cultural context of the Charcoal Land initiative.

The case I analyzed is the Charcoal Land initiative that innovated the traditional practice of charcoal burning. Due to the efforts of the Charcoal Land initiative over 20 years, the traditional practice of charcoal burning revived and reconfigured from purely economic to social and cultural. The efforts of the Charcoal Land initiative led to the spreading of the charcoal burning practice all over Slovenia achieving impacts on multiple levels, from individuals and local, to national and international. The overall development and impacts of the Charcoal Land initiative depict the temporal context of the Charcoal Land initiative and are in detail described in section IV, sub-section 4.2.2 (The development of the Charcoal Land initiative).

The case study was composed of four nonlinear, loosely organized and iterative phases (

Table 7): zooming in and zooming out, both of which could be shallow and deep (Nicolini, 2012). These phases were designed to correspond to the constructs of the analytical framework developed based on the literature review and analysis. Data collection methods were used together in all four phases. As case study methodology is in detail described in the section, sub-

section 4.3 (Study 3: Role of public actors in the forest-based social innovation - The case of the Charcoal Land initiative in Slovenia) here I just shortly reflect on the overall case study design.

Table 7. Research questions and framework constructs in relation to case study phases and data collection methods

Research question	Framework construct	Predominant phases	Data collection method
3.1 How does public actors' role influence forest-based social innovation initiatives?	Context	Shallow zooming-out	Document analysis Key-informant interviews Semi-structured interviews
	Role	Deep zooming-out	
3.2 What are the governance sub-capacities of public actors involved in the forest-based social innovation initiative?	Actors	Shallow zooming- in	
	Roles and capacities	Deep zooming-in	

Source: Own elaboration

During shallow zooming out, I got familiar with the overall development of the Charcoal Land initiative, and reconfigurations of the charcoal burning practice over 20 years. This analysis depicted the temporal, social and spatial context of the Charcoal Land initiative, and resulted in the decision to focus shallow zooming in phase on the in-depth analysis of the preparatory action. Through the phase of deep zooming-in, I identified public actors involved in the initial phase of the Charcoal Land initiative, as well as their roles. The deep zooming-out phase was used to deduct conclusions on the significance of public actors' role in the development of forest-based social innovation, and governance capacities. As a part of the zooming-out phase, I also conducted an analysis of policy framework conditions for the development of forest-based SI in Slovenia. The data collection included document analysis (archive material of the Charcoal Land initiative and policy documents), key-informant interviews (in-depth, unstructured) and semi-structured interviews (Whitehead, 2005). The data analysis included event-sequence analysis (Spekkink, 2013), narrative analysis (Earthy and Cronin, 2008), and content analysis (Mayring, 2014).

IV. RESULTS

This section presents the empirical results of the research. It is composed of three related studies (Studies 2 - 4). Sub-section 4.1. features Study 2 on the role of public actors in SI initiatives, focusing on their organizational roles and influence on SI development. Study 2 is followed by a brief introduction (Sub-Section 4.2) that outlines the temporal and material context of the case study. Case study results on the roles and capacities in the forest-based SI initiatives are presented as Study 3 in the sub-section 4.3. Finally, sub-section 4.4 presents Study 4 on the policy framework conditions for the development of forest-based SI in Slovenia.

4.1 Study 2: Roles of public actors in social innovation initiatives in marginalized rural areas

Details: This study is the article in the preparation. It is planned to submit this article to the *European Public & Social Innovation Review*

Research team/Authors: Todora Rogelja[1], Ivana Zivojinovic[2], Riccardo Da Re[1], Laura Secco[1], Peter Edwards[3]

All researchers jointly conceived and designed the idea of the study; Rogelja, T. and Ivana Z designed the survey; Da Re R., Secco, L, and Edwards, P helped provided the overall critical revisions of the survey and results

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4.1.1. Introduction

Until recently, the general opinion was that public actors are incapable of innovation (Nicholls et al., 2015). The low ability of public actors for innovation was prescribed to long bureaucratic procedures, hierarchical rigidity, and lack of economic incentives and motivation of public actors to innovate. Rising societal demands, pressures from market actors, wicked environmental problems and weakening of the state put the pressures on the public sector and raised the need for innovation. Today, it is not a question anymore if the public sector can innovate, but how (Sørensen and Torfing, 2013).

In the last decade, the European Union reached for SI, as a mean for solving collective, wicked problems that public, civil and private sector was not able to solve separately. As SI is based on the voluntary engagement of civil society, the role of public actors in SI received less attention. But, "social innovation in the public sector is critical to the development of societies and economies" (Ferreira et al., 2018, p. 40). Although rarely focused on public actors, studies on SI undoubtedly indicated that public actors have a role in SI initiatives (Butzin and Terstriep, 2018).

When engaged in SI initiatives public actors are in a unique position of balancing in the intersection of hierarchical state authority and the collaborative and networked social innovation. In fact, public actors might act as agents of SI, they can be the innovators themselves. "Innovators are actors who are authorized by their organization to cross the boundaries in order to collect information and new knowledge and to bring these back to their organization in a coded form." (Harrisson, Chaari, and Comeau-Vallée, 2012, p.5). This is what makes public actors' desirable partners in SI initiatives - they often present a "bridge" to access to and support from the larger state apparatus (i.e. access to resources, political and policy support, legitimization).

While existing typologies usually classify actors' role in SI initiative in relation to initiative development (see Butzin and Terstriep, 2018; Secco et al., 2017b; Wittmayer et al., 2017a), the role of public actors in SI initiatives in relation to their organizational role was not investigated in depth until now. This study aims to investigate how the organizational roles of public actors influence social innovation initiatives. To fulfill the aim the main research question and zero (H_0) and alternative hypothesis (H_1) hypothesis were designed:

RQ: *How does public actors' role influence forest-based social innovation initiatives?*

H_0: Public actors do not have a significant influence on social innovation initiatives

H_1: Public actors have a significant influence on social innovation initiatives

4.1.2 Methods

This study utilizes on survey research method. The survey is the method used to gather information from a portion of a population of interest (sample size) depending on the purpose of the study with the aim to obtain a composite profile of analyzed the population (Stoop and Harrison, 2012, p. 8). For survey purposes, the database from the project "Social innovation in the marginal rural area (SIMRA)", as it contains SI cases from marginal rural areas.

The database included 211 validated SI initiatives from the field of agriculture, forestry and rural development sector. Based on the names of the initiatives, contacts (e-mail and webpage, address) were retrieved using internet search. The survey was launched at the beginning of July 2019, by sending an e-mail invitation directly to the initiatives. This means that the respondents of the survey were initiative members, usually managers, directors or leaders. Until the end of August, a total of first invitation and three reminders were sent to the initiatives. The invitation was sent on the English language, while the reminders were at least two additional languages, depending on the country where the initiative is based. Three reminders were sent on every two weeks, and about 50 initiatives were also contacted via Facebook or they're via contact forms on their webpages.

The survey contained two main parts: an introductory part with the general questions about the initiative, and part of the role of the public actor in social innovation initiatives (Annex C ***Survey on the roles of public actors in social innovation initiatives***). There were 19 questions, mostly single choice and closed. The answers were offered in advance, and only a few questions were open questions. The survey was available in 7 languages: English, Italian, German, Spanish, French, Slovenian and Serbian. The master version was developed in the English language, while translation on Slovenian, Italian, and Serbian language was done by authors. Translation on French, Spanish and German were done by a professional translator. The survey was then designed online and disseminated using an application called Survey Monkey (surveymonkey.com/r/socialinnovationroles).

Survey data were obtained in July and August. Out of 211 validated initiatives in the database, 206 were contacted, while for 5 initiatives the contacts could not be obtained. From 206 sent invitations, 20 e-mail messages returned, due to the non-existing or expired addresses. In this way, 186 initiatives were successfully contacted. From 186 contacted initiatives, 23 initiatives

responded[11] (response rate 12.4%), from which 18 completed the survey (78% of respondents). The collected data were nominal and ordinal. Due to the nominal and ordinal data, non-parametric tests were planned to be used, such as Wilcoxon or Mann-Whitney tests. Non-parametric tests are based on fewer assumptions (e.g. no assumption that the outcome is approximately normally distributed), but this also makes them less powerful. But, as the number of responses was very low (response rate of 12.4%), it was not justifiable to conduct statistical analysis and test the hypothesis.

For that reason, a mitigation strategy for dealing with unsatisfactory survey results was applied. It was planned to have the survey open until September 1st, but it will stay open at least until the end of September, with planed one more reminder to be sent.

Obtained responses until September are used to conduct the basic descriptive statistics (i.e. frequencies). They gave an insight into the engagement of public actors in SI initiatives, their roles, and their influence. Conclusions are derived based on the obtained results and conceptual considerations, with the caution that generalization is not possible.

4.1.3 Results

Initiatives were from 13 countries, whereas the highest number of respondents was from Spain and Serbia (Figure 6). From 23 initiatives that responded, 5 is working in the agricultural sector, 5 in tourism, 4 in rural development, 3 in the energy sector, 2 in social services, 2 in art and culture and 1 in the forest sector. Initiatives that responded are in majority in the implementation phase, which includes implementation of project activities (19 initiatives), while 2 initiatives are in the preparatory phase, that includes development and spreading of the ideas, and mobilization of other actors necessary to start with activities. Two initiatives ended their activities.

[11] From September 1st to September 25th, 3 more responses were received, but they are not included in the analysis and results in this dissertation. They will be included in future analysis for before finalization and submission of the article.

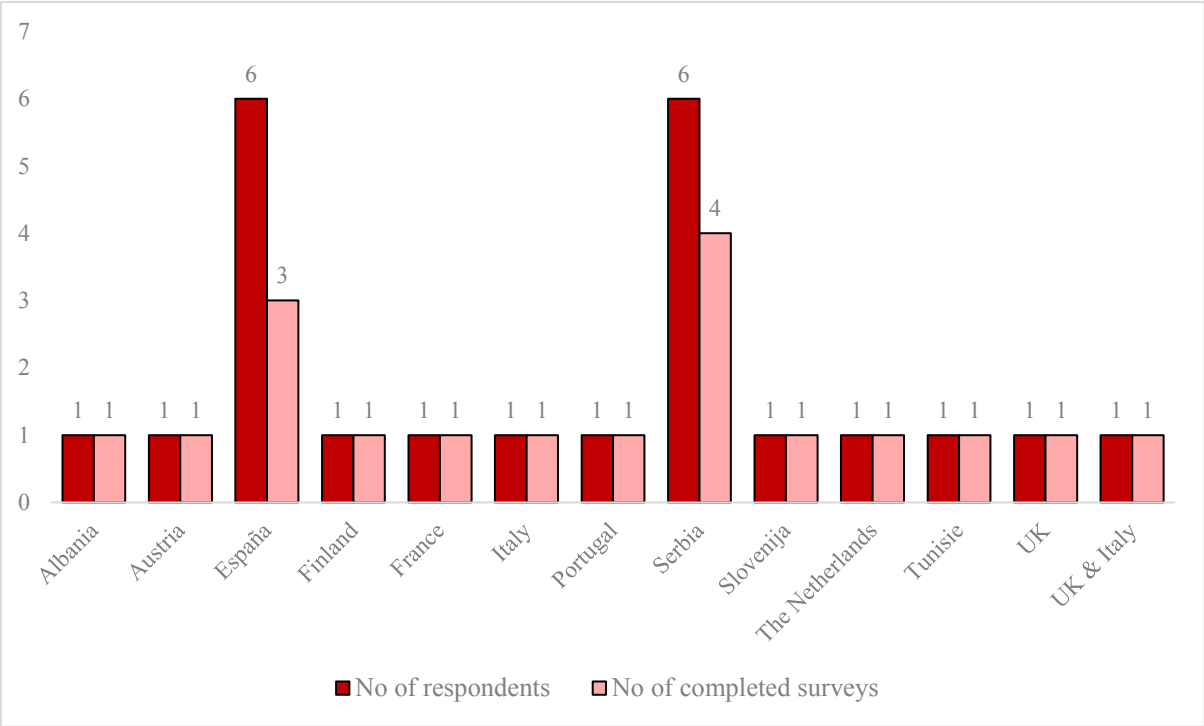

Figure 6. Number of responses and completed surveys per country (Source: Own elaboration)

From 23 initiatives that responded, 16 initiatives reported that public actors were involved in initiative activities, while 7 initiatives stated that public actors were not involved (Figure 7).

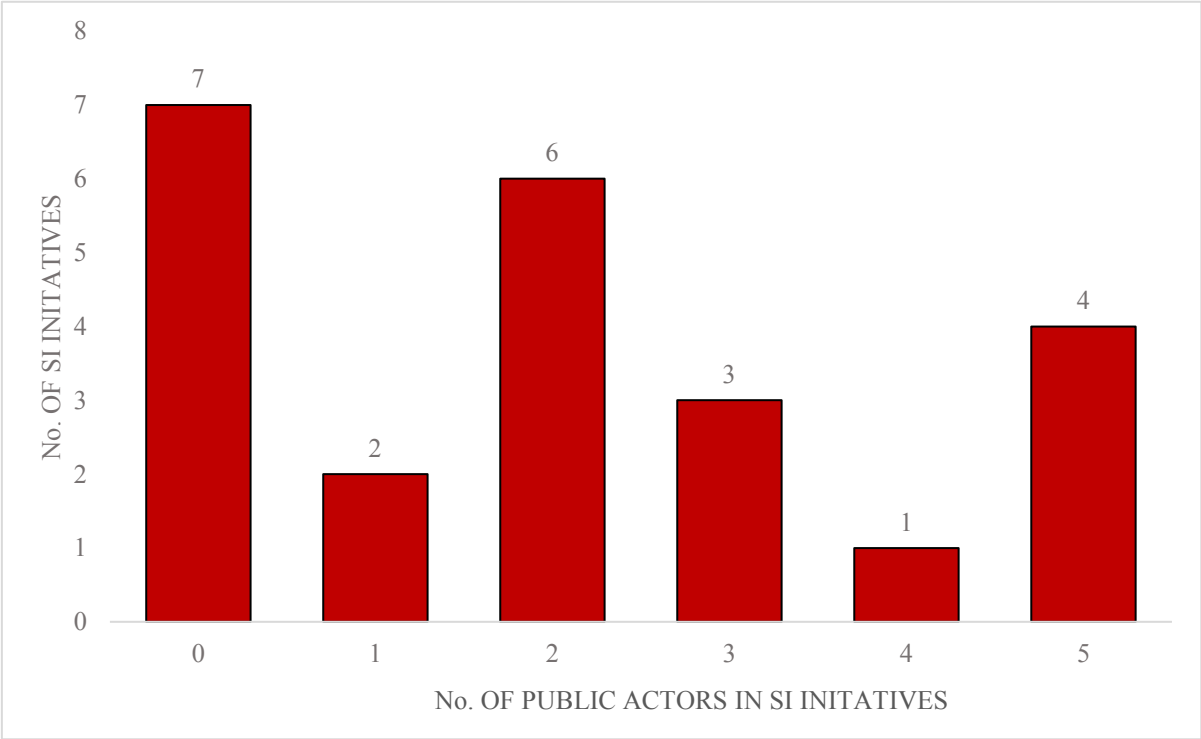

Figure 7. Number of public actors engaged in social innovation initiatives (Source: Own elaboration)

From 16 initiatives that reported the involvement of public actors detailed information was obtained for 21 public actors. From those 21 actors, 12 actors were from local, 5 from regional, and 4 from the national level. Moreover, 9 actors were Municipalities, 6 public agencies, 5 ministries, and 1 public enterprise. Regarding the sector, 9 actors came from public administration, 7 from rural development, while 1 actor was from tourism, nature protection, forestry, energy and agricultural sector each.

The respondents reported the involvement of public actors in both, preparatory and implementation phase of the initiative, their engagement initiative activities were relatively low. The highest number of actors was involved in up to 30% of initiatives activities (occasional involvement), while only two actors were involved every time in activities of the initiative (Figure 8).

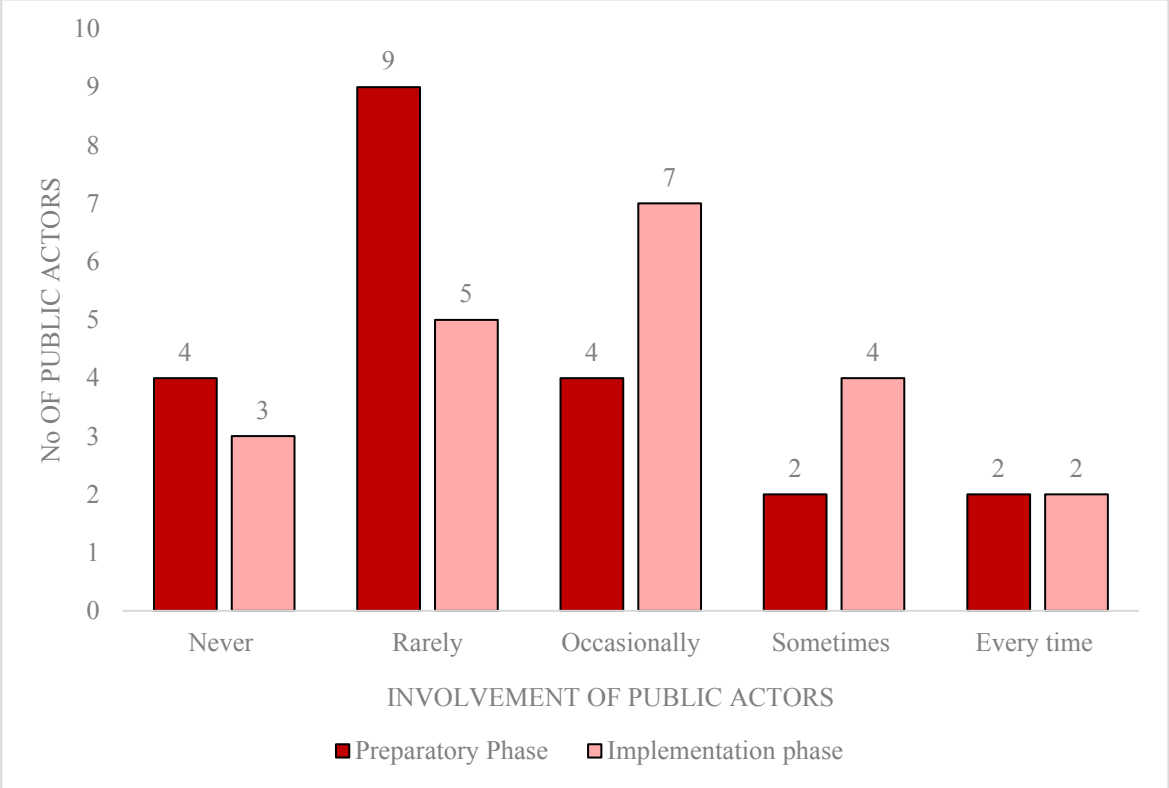

Figure 8. Involvement of public actors in the initiatives' activities (Source: Own elaboration)

In general, respondents reported that the overall influence of 15 public actors on initiatives development was positive, 2 had a negative influence, and only 3 public actors did not influence the development of the initiative at all. Identified public actors had roles[12] in the various

[12] To ensure clarity of the roles, each role and activity was defined in the survey. For definitions, please refer to Annex C ***Survey on the roles of public actors in social innovation initiatives***

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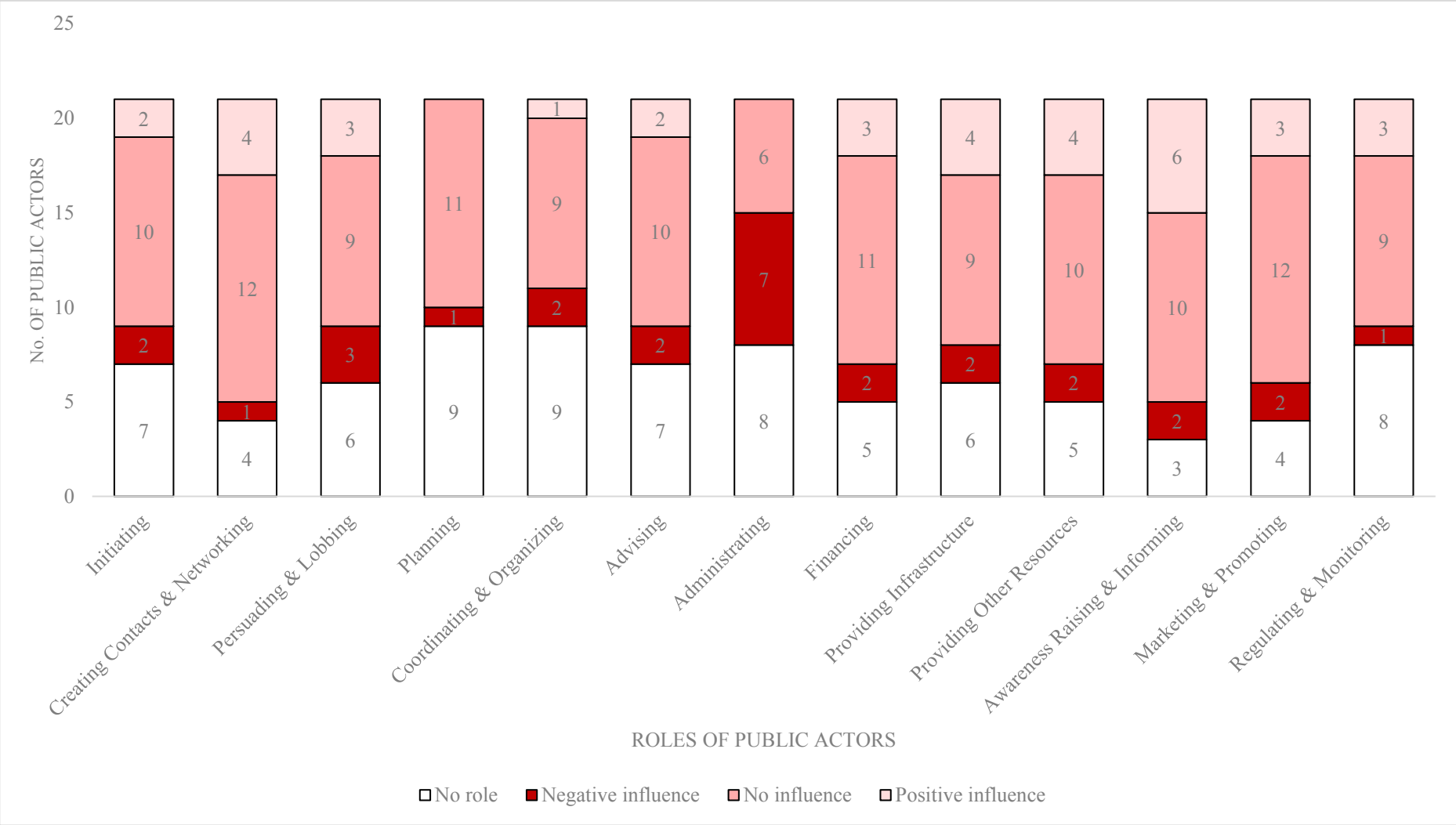


Figure 9. Role and influence of public actors on initiatives activities (Source: Own elaboration)

activities of the initiatives (Figure 9). Regardless of that, most of the actors did not have an influence on some of the initiative activities.

The networking, financing, providing infrastructure and other resources, awareness-raising, promoting and monitoring the role of public actors are perceived to have more positive than the negative influence on initiative activity. Public actors' role of initiating, lobbing, planning, coordinating and administrating is perceived to have more negative than the positive influence on initiatives activities.

Respondents had divided opinion about the importance of public actors for the overall development of their initiatives (Figure 10). Although all respondents perceived that public actors are to some extent important for the development of SI initiatives, 6 respondents consider this importance as low.

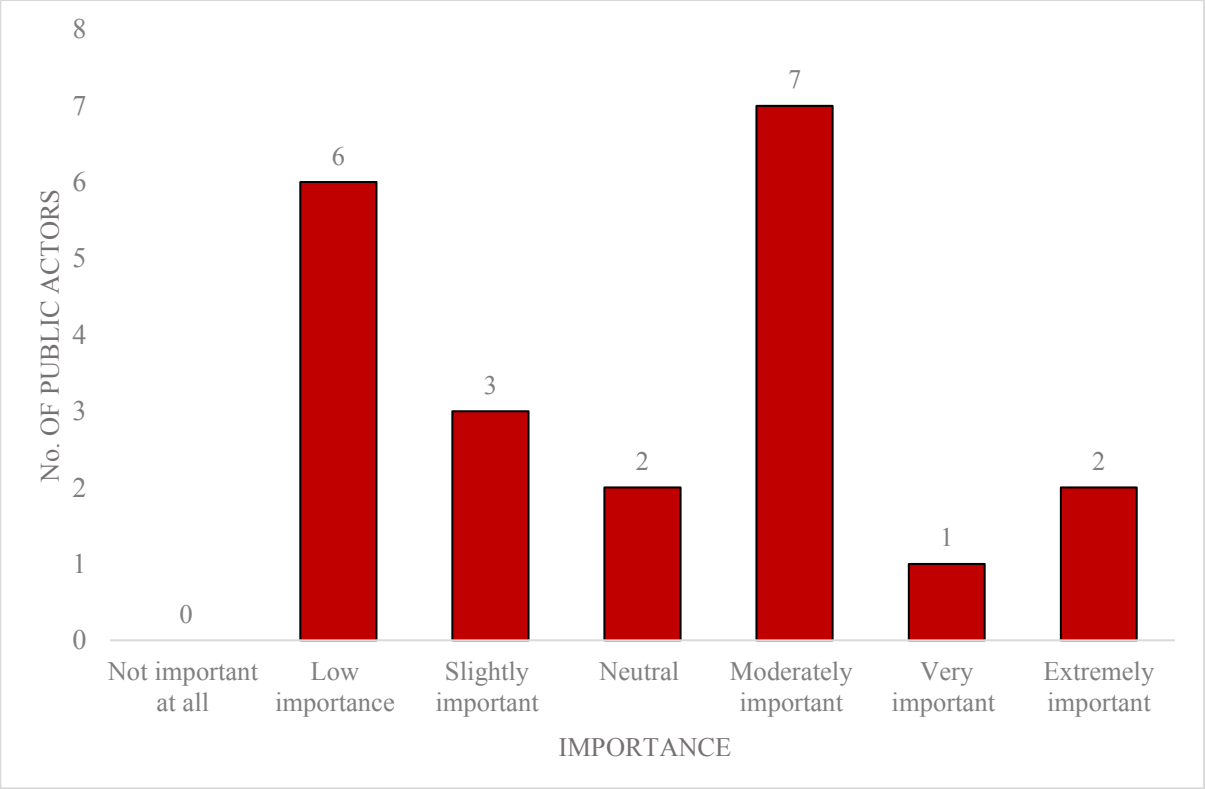


Figure 10. Importance of public actors for the development of social innovation initiatives (Source: Own elaboration)

4.1.4 Discussion and conclusions

Results clearly indicated that public actors were involved in SI initiatives. As a high number of public actors were from the local level, this might point to the local nature of the SI initiatives. Further on, as most of the actors were public administration indicating their bureaucratic tasks. This finding is highlighted by the result that the administrative and planning roles of public

actors were perceived as with the negative influence on the development of SI initiatives. Negative influence might be explained by long bureaucratic procedures in the hierarchically organized public sector. This is all aligned with the prevailing opinion that the public sector is limited in innovation (Nicholls et al., 2015; Sørensen and Torfing, 2013).

Administrating and planning the role of public actors, as well as organizing and coordinating might negatively influence SI initiatives because it is dominated by conservative positions, long procedures and cannot be flexible and dynamic enough to guide dynamic processes and quick changes imposed by private or civil society driven initiatives. This, in turn, might have an impact on the institutionalization and scaling-up of SI, where coordinating the role and capacity of public actors is crucial (Baker and Mehmood, 2013).

Exactly from this reason, adaptive capacity is one of the crucial governance capacities public actors need for social innovation. To be able to support and positively influence the SI initiative, public actors need to be able to quickly respond to changing conditions and demands and to flexibly react in new situations (Harrisson et al., 2012; Liu and Ko, 2012).

Results also indicated that public actors' roles of contacts and networking, as well as awareness-raising, and informing were perceived to have more positive than the negative influence on SI initiatives. Indeed, this is well aligned with current studies on SI, which underlined that knowledge and learning are crucial in SI processes (Harrisson et al., 2012; Liu and Ko, 2012; Moore and Westley, 2001). In this sense, public actors, are the ones that have professional expertise and training, as well as knowledge about state systems and practices

The resourcing role of public actors was also perceived to have more positive than the negative influence on SI initiatives. With respect to resourcing role, the distinction was made among financing, providing infrastructure and providing other resources. Interestingly, financing role was found to be mostly neutral to positive, which is to some extent opposed to the dominant consideration that public actors are crucial in providing finances to SI initiatives (Butzin and Terstriep, 2018). But, in many instances, public actors are not in the position to directly finance SI initiatives, so they provide financial means through subventions, social credits, or on some other ways (e.g. in-kind financing). This might also be connected to relatively positively evaluated regulating the role of public actors, as trough regulation they can provide subventions or other flexible financing mechanisms. The role of providing infrastructure is also not surprising, as infrastructure (especially road, water infrastructure, and telecommunications) is often within the jurisdiction of public actors.

Survey results pointed out that public actors also had a role in initiating SI initiatives, which is aligned Butzin and Terstriep (2018) findings. They found out that 45% of public bodies have the role 'central developer'. Central developer or 'an innovator' in the terms of Secco et al (2017b) is an actor that conceives the idea and has the ability to translate the knowledge of the undesirable circumstances into an innovative idea. This finding indicates that although the public sector can be limited in innovation, in some cases public actors can raise an initiative for innovation.

Acting as an initiator or innovator in SI crosses the borders of organizational roles of public actors (Harrisson et al., 2012). As organizational roles are the ones that public actors have based on their duties and responsibilities in their organizations, initiation SI initiatives are hardly a part of them. This implies that besides organizational roles, public actors also have different roles in SI initiatives – different in terms of what is expected of them to do.

Although this research did not yet produce statistically significant results, it indicated that public actors do have multiple roles in SI initiatives that influence, both positively and negatively initiatives development. Thus, it is clear that public actors are an integral part of SI (Swyngedouw, 2005), whereas in some cases, and some more traditional sectors, such as forestry they can even play a crucial role (Arts, 2014a; Sergent et al., 2018). Having in mind these findings, local, regional and national public actors should pay more attention to the innovative initiatives and (at least) remove barriers to create enabling conditions for SI.

As the studies focusing on public actors in SI initiatives are scarce, this exploratory study offered valuable insights into various roles and capacities of public actors engaged in SI initiatives. The findings thus created a basis for further, more focused exploration of public actors' roles and capacities. Future research should focus on providing more empirical evidence on the types of public actors' roles in SI. Understanding how a particular role influences the SI initiative, and what impacts it has on the outcomes of SI can increase the success of SI.

4.2 Introduction to the case study

This section introduces the case of the Charcoal land initiative It first presents the material context (sub-section 4.2.1), followed by a brief overview of 20 years of its development (temporal context) (sub-section 4.2.2).

4.2.1 The case study area: Dole pri Litiji, central Slovenia[13]

The Charcoal Land covers an area that falls under the administrative unit of the local community[14] Dole pri Litiji located in the eastern part of the Municipality of Litija. It positioned in the center of Slovenia on the western part of the Posavje Hills, about 37 km southeast of the capital city of Ljubljana. The local community Dole pri Litiji covers approximately 55 km^2 (25% of the Municipality territory) and is characterized by hilly to rugged terrain. It includes 28 villages and hamlets, with approximately 770 inhabitants in 250 households. The households are individual or in a group of few, connected by poor road infrastructure.

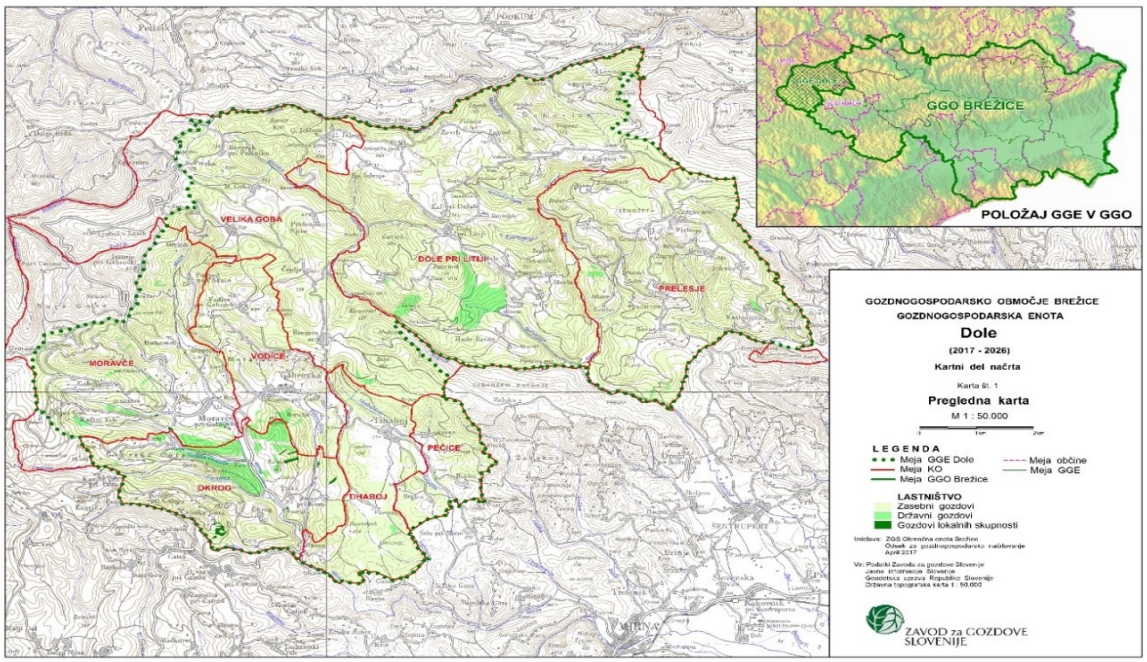
There are approximately 120 farms in the area. Most of them are small and fragmented with 2 - 5 ha of farmland. Only 6 households have farms bigger than 5 ha. As 60% of all agricultural areas are on the steep slopes, farming is characterized by extensive grassland management. Focus on self-supply of food and feed is strong and most of the farms produce forage crops and silage maize. Vegetables and fruits for human consumption are usually produced in the gardens next to individual households. (Martin Höher et al, 2017).

Forests in the local community Dole pri Litiji fall under the Local Forest Management Unit (LFMU) Dole. It covers 8 464 ha from which forest area covers 5 420.78 ha (64%). Growing stock is about 279.4 m^3/ha, with an annual increment of 6.86 m^3/ha. With 1 264 of private forest owners, the average size of private forest estate is 4.3 ha. Realized annual fellings amount 90.3 % of planned fellings, which is quite a high percentage having in mind that 95.4% of forests are privately owned (Zavod za Gozdove Slovenije -Območna Enota Brežice, 2017, pp. 17–40). This makes private forest owners in Dole active, which is not the case for most private forest owners in Slovenia (Malovrh et al., 2015). “Local forests are well managed by owners, which are fairly well-equipped with adapted forest machinery as well as tractor semi-trailers for the transport of wood and chips” (Höher et al., 2017, p. 17). Due to the efforts made by the Charcoal

[13] This sub-section was submitted an annex of Study 3: Role of public actors in the forest-based social innovation - The case of the Charcoal Land initiative in Slovenia, to the Journal of Forest Policy and Economics

[14] Local community is the sub-unit of local self-government, established by the statutory act of the Municipality, and based upon geographical location.

land initiative, the traditional charcoal burning practice plays a major role in the area of Local community Dole in both economic and cultural sense.



Picture 1. Share of state and private forests in the LFMU Dole and its position in the regional management unit Brežice (Source: Zavod za Gozdove Slovenije, Območna Enota Brežice, 2017, kartografski del)

Charcoal burning in Slovenia is a 1000 years old practice, that was intensively performed until the Second World War (WWII) solely with economic purpose. After WWII, the traditional charcoal burning decreased, and until the 1980s almost disappeared. In the late 1990s, a few charcoal burners from the village Dole pri Litiji (today is known as the Charcoal Land) together with local forester (Mr. J.P.) started reviving the practice of traditional charcoal burning.

Although charcoal burning was widespread in other areas of Slovenia since the Renaissance period (e.g. Pokljuka), it was brought to Dole pri Litiji by Italians around 1848. Until WWII charcoal production was the only single source of earnings since there were no other job opportunities (Prah, 2009, 2004). During WWII, charcoal production decreased, but it bloomed again in the post-war period. The coal was exported mainly to Italy, while among the domestic consumers were the large customers of two local factories (Sevnik, 1936). The intensive charcoal burning had devastating effects on the forests that were heavily degraded because of overuse. With the development of industry and technology, the charcoal burning practice started disappearing. Only in a small number of villages in the local community Dole, charcoal burners could be found. The area was and still is struggling with the globalization, rural depopulation, and economic crisis. As intensive farming is not possible the small and medium-sized farms are

disappearing. A combination of poor infrastructure conditions, low level of education, and a lack of business skills lead to increased migrations. Most of the inhabitants travel to larger towns to work and young people are moving to cities where they have an opportunity to study or work (Lekenik et al., 2016; Obcina Litija, 2016).

Regardless of the challenges, the traditional charcoal burning was facing, it stayed alive in the local community Dole and spread all over Slovenia. Although thorough history the area of Dole pri Litiji was not the one with the most charcoal burning today most of the charcoal is burnt exactly there. Every year about 16 charcoal burners in Dole prepare about 30 charcoal piles producing charcoal for the whole region. The size of the charcoal pile varies from 5 – 200 m^3, which is the maximum in the recent history achieved in summer 2019. Today, around 50 charcoal burners traditionally burn charcoal in 20 areas in Slovenia, having a positive impact on Slovenian rural population and natural environment (e.g. providing additional income to the rural population, maintenance of cultural heritage and cultural landscapes, activation of private forest owners in conducting sylvicultural works, etc.).

4.2.2 The development of the Charcoal Land initiative and reconfiguration charcoal burning practice

For an understanding of the development of the Charcoal Land initiative, it is important to first understand what makes this initiative socially innovative. As mentioned in the Sub-section 1.2.2 SI in the fields of agriculture, rural development and forestry can be defined 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." (Polman et al., 2017, p. 12). Looking into the Charcoal Land initiative, the social practice is the one of charcoal burning, which in the past was conducted with the sole economic purpose for industry needs. After 20 years of activities of the Charcoal Land initiative, this traditional practice is today done with the aim of preservation of intangible cultural heritage, although economic benefits also play a small role. This reconfiguration of traditional charcoal burning practice was caused by the hardship of the area of Dole pri Litiji brought by the decline of industry, loss of jobs, and migration of population to urban areas. This is the social challenge that the initiative addressed. Enhanced outcomes on people's well-being are manifested on multiple levels, from an individual (such as the sense of self-worth of charcoal burners), local (i.e. improved infrastructure in the local community) to national (such would be the spreading of the practice all over Slovenia). To avoid repetitions the outcomes are explained in sub-section 4.3.1. Finally, the voluntary engagement of civil society in the Charcoal Land initiative is one of the charcoal-burners. Although the idea came from a public actor, charcoal burners of Dole pri Litiji took on the idea voluntarily and co-developed it together with other civil, public and private actors.

The other definition of SI relevant for forestry is the ''reconfigurations of relationships between state, market actors, civil society and science that facilitate a movement from authoritative state to participatory forest governance to better meet the concerns of local resilience, environmental and social sustainability, people on the use of ecosystem services'' (Sarkki et al., 2019, p. 1602). In the case of the Charcoal Land initiative, the relationship between the state and civil actors reconfigured. Even more exact would be to say that due to the Charcoal Land initiative, the relationship between State forest service and charcoal burners was created. Due to the charcoal burning practice charcoal burners (who are private forest owners) started to actively manage their forests. This engagement in forest management did not come from the State forest service but is the result of revived charcoal burning practice, and collaborations with district foresters and local administrators. The charcoal-burning today contributes to social, environmental and

economic sustainability, as it gives people a sense of worth, provides economic income and adds value to the low-quality wood, and contributes to managed private forests.

For analyzing the development of the SI initiatives 3 broad phases of the SI process can be distinguished: preparatory, reconfiguring and project (Secco et al., 2017b). The first phase of the SI process is called preparatory actions for collective benefits, which is characterized by the development of novel ideas. The novel ideas are usually developed by individuals or small groups (the innovators). These novel ideas can be developed and implemented into collective action (Górriz-Mifsud et al., 2018; Secco et al., 2017b). As a few more actors (the followers) join they decide to "believe and take up the idea, and make it acceptable, feasible, and often amplify and implement it in its initial stages (Secco et al., 2017b, p. 49). Preparatory action includes all those activities that innovators and followers carry out to prepare the ground for more systematic collective action.

Preparatory actions lead to a process of reconfiguring of governance arrangements; networks or attitudes, which mark the second phase called reconfiguring and reconfigured social practices. Social practices "refer to everyday practices and the way they are typically and habitually performed in (much of) society"(Holtz, 2014, p. 1) Through this phase SI agency grows, by attracting more actors (the transformers), that test and consolidate the novel idea leading to reconfigured social and institutional practices. "Changes in governance arrangements refer to formal institutions (as policies, laws, regulations, guidelines, codes, standards), as change and adaptation of governance and institutional arrangements in relation to the role of public entities and authorities in facilitating social innovation (both internally and externally)" (Secco et al., 2017, p. 56).

The process of reconfiguring leads to the project or projects needed to implement and realize SI idea in practice – the phase called project activities, procedures, and practices. Project activities and related procedures and practices refer to what is done once the SI initiative becomes operational through SI projects, thus acting regularly producing outputs, outcomes, and impacts. Through SI projects the novel SI ideas are implemented and the "actions may spread to higher levels of the system. This interaction generates products (such as relationships, collaborations, networks, institutions, and other new governance arrangements), and outcomes (negative or positive) that can potentially change many, or perhaps all, of these input factors" (Górriz-Mifsud et al., 2018, p. 21)

The development of the Charcoal Land initiative and reconfiguration of charcoal burning practice took 20 years following all three phases of the SI process (Figure 11).

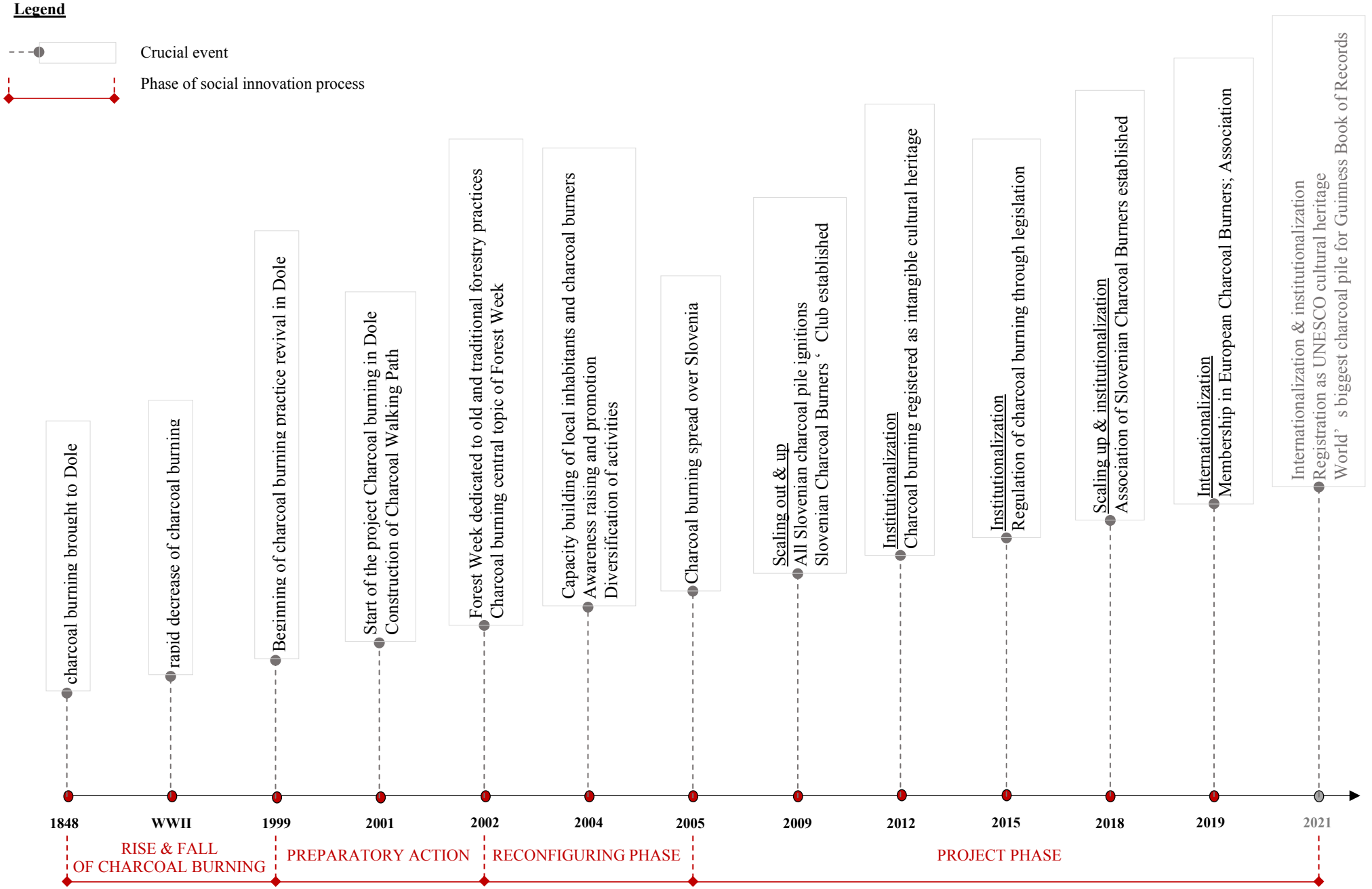


Figure 11. Timeline of the development of the Charcoal Land initiative and reconfiguration of traditional charcoal burning practice in Slovenia (Source: Own elaboration)

Preparatory action

1999 – 2001: Idea initiation and development – The revival of charcoal burning practice started in the area of Local community Dole, with the idea of the two regional foresters (Mr. J.P. and Mr. Z.K.) who noticed that the charcoal burning is still occasionally practiced by a few families. They mobilized a small group of actors and elaborated the idea in the working draft called *Charcoal burning in Dole* (Slo. *Oglarjenje na Dolah*), listing all the potential benefits of the revival of charcoal burning practice (AD ID4, KII2, SSI2). During 2001, this small group of actors attracted several more charcoal burners and formed the Section for Preservation of Natural and Cultural Heritage, under the Sports Society Dole pri Litiji. (AD ID12, SSI2, SSI4). They affirmed their idea in the wider community during the celebration of the Local community day (ADs ID9, 10, KII2, SSI12). They constructed and registered the Charcoal Path that has an educational and recreational purpose (AD ID25). For the official starting of the project *Charcoal burning in Dole*, they decided to try to connect charcoal burning with Forest Week 2002 (AD ID22).

Reconfiguring - growth, testing, and consolidation

2002 – 2004: Promotion, growth, testing, and consolidation – As the SFS director dedicated the Forest Week 2002 to traditional forest practices and skills, the ignition of the Charcoal pile in Dole was as a central event (AD ID28, KII3, SSI8). Forest Week 2002 included many side activities, such as publishing the book about charcoal cooking in Dole pri Litiji, literary competition, the photo competition, and the painting workshops in the area of Dole pri Litiji (AD ID31). Forest week 2002 was promoted in local and national media, (ADs ID 41,42), and attracted politically important persons (such as the Minister for Agriculture, forestry, and food) to ignite the charcoal pile (ADs ID 54 – 56), which gave the national visibility to charcoal burning in Dole (KII2, SSI5 - 8,10,12)

After Forest Week 2002, Local community Dole took part in the project Development nucleus (*Slo. Razvojno jedro*), whose aim was to connect farmers and inhabitants in the rural networks, improve the quality of living, provide information about the markets for rural product, and help inhabitants in placing their products on the market. As a part of this project, a series of capacity building workshops were organized by Development Center Litija and held by a private enterprise Vibacom l.t.d., during 2004. These workshops resulted in the SWOT analysis, new vision and 2 content cores with 3 strategic aims and concrete project ideas for further development of the area. The workshop participants identified the potential financing sources

and marketing strategies for each project idea (AD ID 165-167). Concurrently, Mr. J.P. started to collect the information if somewhere else in Slovenia charcoal burning is still practiced.

Project phase - implementing, scaling, spreading

2005 – 2018: Implementation of developed activities, scaling out, institutionalization and scaling up – In this period the Charcoal land initiative continued with already developed activities, such as traditional walk on the Charcoal path, painting colony, celebration of the Local community day, etc. (ADs ID 186, 188, 190, 191,202, PO 2017-2019), which were followed with media attention (ADs ID187, 198, 207).

During the celebration of the Forest Week 2005, the charcoal pile was ignited in Rakitnica (scaling out). Besides the charcoal pile in Rakitnica, in the period of 2005 – 2008 other charcoal piles were ignited on Bled, Sv. Mohor, Ribnica, Gabarska Gora, Sostanj, Postojna, Skofja Loka, Idrija, Mislinja and Gorenja vas (ADs ID 192, 207, 209, 216, 230, 244, 245, 250, 252, 256).

From the beginning of 2009, Mr. J.P., State Forest Service, Cultural touristic recreational center Radece, and charcoal burners intensively worked on the organization of the national charcoal burning event. During one of the organizational charcoal burners meeting, they informally connected and established Slovenian Charcoal Burners' Club (Slo. Klub oglarjev Slovenije) (ADs ID 260-262). They organized the event *All Slovenian charcoal pile ignitions* (*Slo. Vseslovensi prizing kop*), as a series of ethnological events giving central parts to the simultaneous ignition of 20 charcoal piles all over Slovenia (ADs ID 271, 272, 286, 289, 290, 292 – 294, 308).

In 2012, charcoal burning was registered as intangible cultural heritage and entered in the Register of Cultural heritage (MIZKS, 2012). Moreover, under Slovenian Charcoal burners' Club, charcoal burners gathered once a year (often in conjunction with the Forest Week celebration) in a different location.

In 2015, traditional charcoal burning was regulated by Decree on subsidiary activities on farms (Official Gazette No. 57/15 in 36/18). This means that charcoal burning has to be registered by an agricultural holding (farm) as complementary activity in agricultural holding, under the group of activities Processing of Forest Timber Assortments. Traditional charcoal making within this category belongs to performing complementary activities related to traditional farm knowledge, services or products (code 2.200 - felling). During the registration of traditional charcoal burning as a complementary activity, it also has to be registered in the Craft register managed by The Chamber of Craft and Small Business of Slovenia.

During the national gathering of charcoal burners in September 2018, informal Slovenian Charcoal burners' Club changed the legal status into the Association of Slovenian Charcoal burners. In September 2019, Association of Slovenian Charcoal burners became the member in European charcoal burners Association. In 2021, they plan to register traditional charcoal burning in Slovenia in the UNESCO list of cultural heritage and to prepare and ignite the World's biggest charcoal pile for Guinness Book of the Records.

4.3 Study 3: Role of public actors in the forest-based social innovation - The case of the Charcoal Land initiative in Slovenia

Details: This study is under the revision in the Journal of Forest Policy and Economics. It presents an in-depth analysis of the roles and capacities of public actors involved in forest-based SI initiative

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Author Contributions: All authors jointly conceived and designed the idea of the article; Rogelja, T., conducted the research, analyzed and interpreted data, and wrote the article; Weiss, G, Ludvig, A., Prah, J., Shannon, M. A. and Secco, L. helped to structure the contents and provided the overall critical revisions of the article.

Keywords: state actors; social innovation agents; role as a resource; forestry innovation; traditional charcoal burning; Slovenia

4.3.1 Introduction

The European forest-based sector recently entered the state of 'creative deconstruction' (EFI, 2014; Stern et al., 2018). Driven by new technologies, emerging markets, and increasing societal demands, it became an increasing source of various innovations (Ludvig et al., 2016a; Weiss et al., 2017a; Winkel, 2017; Živojinović et al., 2017). Forest research focused mostly on the product (including goods and services) and process innovation (including technological and organizational innovations), lately followed by policy or institutional innovations (Kubeczko et al., 2006; Rametsteiner and Weiss, 2006; Stern et al., 2018; Weiss et al., 2011a). Nowadays, social innovation (SI) is attracting and more attention (Górriz-Mifsud et al., 2019; Hewitt et al., 2019; Ludvig et al., 2018a; Melnykovych et al., 2019; Nijnik et al., 2019; Nybakk et al., 2015; Secco et al., 2019).

A fascinating case of a forest-based SI is the Charcoal Land Initiative in Slovenia Traditional charcoal burning practices were nearly extinct in Slovenia. Then in the 1990s, a Slovenia forest official imagined an opportunity for improving private forest management, creating new rural economic income, and developing a cultural landscape that would draw people from far and wide. From modest beginnings in the 1990s, this Charcoal Land Initiative is now planning to build the biggest charcoal pile in the world for the Guinness Book of Records and to register as a UNESCO cultural heritage site in 2021. Due to the efforts of the Charcoal Land initiative over 20 years, the traditional practice of charcoal burning was revived and reconfigured from purely an economic activity into a social and cultural set of collective practices. Public officials and civil society actors created new forms of the collective agency under the Charcoal Land initiative. The Charcoal Land Initiative utilized charcoal burning practices all over Slovenia to achieve innovative and remarkable impacts on multiple levels. On the individual level, it activated private forest owners to manage their forests and renewed their sense of dignity. On the local level, the initiative empowered inhabitants of the marginalized rural areas and created new sources of income. On the regional level, it contributed to the preservation of cultural landscapes, while on the national level, it contributed to the representation of charcoal burners' interests under the Association of Slovenian Charcoal Burners. These impacts cumulatively resulted in the creation of new roles for a modern charcoal-burner - craftsman, teacher, practice carrier, engaged citizen and active private forest owner, making the Charcoal Land socially innovative initiative.

The case of the Charcoal Land Initiative is of practical and theoretical interest because it was initiated by a public actor from the Forest Service who then animated other public and private actors to join together in reimagining charcoal production as a way to revive the economic and social future of the forest, communities, and people. Rather than simply passively carry out routine activities of a Forest Service official, one Actor, Mr. J.P., drew upon his own experience living and working in the region and his understanding of the problems facing private forest owners and the isolated rural communities suffering from a lack of economic opportunities. Using his knowledge of the region, he realized that charcoal burning could be much more than a marginalized traditional practice of a few families. What is of great interest theoretically in this case study of social innovation is that he drew upon the resources and capacities of the Forest Service and other public actors to support and enable this the Charcoal Burning Initiative. While , public actors undoubtedly always have a role in SI initiatives, at least in creating the enabling or hindering environment for their development, this case is one of imagining and initiating and creating the capacity for SI to emerge and succeed (Avelino et al., 2017; Berzin et al., 2014; Haxeltine et al., 2016; Neumeier, 2017; Wittmayer et al., 2017b).

There are several ways in which public actors can support or inhibit SI. First, public actors can support or inhibit the shift towards more participatory-based governance by providing the legal and institutional frameworks within which the civil society acts. Second, the reconfiguration of social practices creates new organizations, networks, or governance arrangements, and public actors are often a part of them (i.e. socially innovative public-private partnerships), exercising their executive task. Third, acting for a common good means acting for the interests of the community (collective benefits) that are also typically expected of the public actors. Thus, it seems logical that public actors are an essential component of SI.

Despite the importance of public actors for SI, until now forestry research focused on the civil society (e.g. Górriz-Mifsud et al., 2019; Ludvig et al., 2018b; Nijnik et al., 2019; Simo; Sarkki et al., 2019; Secco et al., 2019). A few studies implicitly tackled the role of public actors in SI, by looking into relevant EU policies (Ludvig et al., 2018a), or implications of policy framework conditions on SI initiatives in Slovenia (Rogelja et al., 2018a). Both studies revealed that existing policies hinder the development of SI due to the top-down logic of public subsidies or a rigid regulatory framework. Although these findings show that public actors do have a significant role in regulating the SI, this is an initial effort to understand if and how public actors actively initiate and directly engage in SI initiatives. This paper addresses the following

research question: *What is the role of public actors in the forest-based social innovation initiatives?*

This article is structured as follows: in section 2 we introduce conceptual considerations of SI, actors, and roles, followed by the methodology and methods (section 3). We then present the results in section 4 which is divided into two sub-sections. We start with the analysis of the first three years of the Development of the Charcoal Land initiative, focusing on the engagement of public actors in its activities (sub-section 4.1). Based on that analysis, in sub-section 4.2, we present the public actors and analyze the role of the crucial ones engaged in the initiative. In section 5 we discuss how crucial public actors reimagined their roles and joined in creating the capacity for action for this SI. In section 6 we draw conclusions on the nature of the types and the multiple roles of the public actors in the Charcoal Land initiative.

4.3.2 Conceptual considerations: Social innovation, public actors, and their roles

Social innovation (SI) in the fields of agriculture, forestry, and rural development can be defined 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." (Polman et al., 2017, p. 12). This definition implies that:

- the process of reconfiguration is the core of SI and leads to the reconfigured social practices, resulting with new organizations, networks, or governance arrangements (Polman et al., 2017; Secco et al., 2017b),
- arises as a response to social, environmental, economic, or other complex problems that were not successfully solved before, leading to the perception of actors that as SI agents they can solve those problems, and are willing to devote energy and resources to them (Melnykovych et al., 2018; Sarkki et al., 2019; Slee et al., 2018)
- leads to improvement in a social system, improving the well-being of wider societal groups, bringing in the element of intentional action for the 'common good' (not just a few individuals or organizations) (Baker and Mehmood, 2013; Bock, 2016; Neumeier, 2017, 2012).
- agency plays a key role in the SI process; it is a distributed and collective agency, and although the voluntary engagement of civil society (such as community members) plays a crucial role, other actors (public, or market) are often a part of it as well (Cajaiba-

Santana, 2014; Haxeltine et al., 2016; Nicholls et al., 2015; Nijnik et al., 2019; Rodima-Taylor, 2012)

Our empirical work focuses on the preparatory action of the Charcoal Land initiative, as it is a critical phase in SI development (Secco et al., 2017b). The preparatory action is characterized by the development of novel ideas and preliminary movements taken by the actors for making things happen in practice. The novel ideas are usually proposed by individuals or small groups (the innovators) and can be developed and implemented into collective action (Górriz-Mifsud et al., 2018). As a few more actors (the followers) join, they decide to "believe and take up the idea, and make it acceptable, feasible, and often amplify and implement it in its initial stages"(Secco et al., 2017b, p. 49). Thus, preparatory action includes all those activities that innovators (and their followers) choose to carry out to prepare the ground for more systematic collective action. In this phase novel ideas might get rejected, actors might not be active enough to bring the innovation to the next phase, or they might not gather enough resources (Górriz-Mifsud et al., 2018; Secco et al., 2017b). Thus, the actions and decisions of public actors can be fundamental for SI development in its initial and crucial phases. Based on the engagement and acting of the public actors in the preparatory action of the SI process, we can distinguish between SI roles of innovator and follower.

Under public actors we understand *all those organizations and individuals acting on the behalf of a governmental body* (Aurenhammer et al., 2018; Sciarelli and Rinaldi, 2016; Knoepfel et al., 2013). We particularly focus on the public actors from the forest sector, distinguishing between organizational public actors (i.e. public organizations) and individual public actors (i.e. employees of public organizations) (Avelino and Wittmayer, 2016). Organizational public actors in forestry are organizations "bound to the particular system of rules, accomplish two main tasks: they directly manage state-owned forests and act as an authority through the policy implementation, meaning provision of information, funding or other available policy instruments" (Stevanov and Krott, 2013, p. 369). Public forestry organizations have a key place in the forest-based sector due to their tasks, a large resource base, financial resources, and significant relationships with key stakeholders (Stevanov and Krott, 2013; Liubachyna et al., 2017). An example of public forestry organizations might be the State Forest Service, as a public organization mandated to implement forest law (i.e. perform management of state forests, monitor health, etc.).

Individual public actors are individuals employed by public organizations. They carry out tasks delegated by their respective organizations. An example of an individual public actor is a person

employed as a district forester or the director employed by the State Forest Service. As individual public actors act on the behalf of public organizations they are the proxy agents of organizations (Hewson, 2010, p. 13). But first of all, individual public actors are human beings, with their own intentionality, motivations, and ways of thinking. Each individual actor will act in its own way exercising direct personal agency (Bandura, 2001; Emirbayer and Mische, 1998).

As proxy agents, individual public actors have certain roles within public organizations – organizational roles. Organizational roles bring a set of certain resources, responsibilities, and obligations prescribed by an organization. Moreover, they are also generally accepted by society and followed by a certain understanding of how an individual public actor should and should not act (Callero, 1994). In fulfilling their organizational roles, individual public actors are bounded by duties and responsibilities. At the same time, individual public actors can act outside of the normal bounds of duty and responsibility, but not usually fundamentally against what is expected and required. In this exercising of direct personal agency, individual public actors can use their role as a resource in a creative way to achieve certain goals and engage in social innovation.

Using the concept of roles, it is possible to investigate how different individuals interpret their responsibilities and duties in such ways that lead to initiating and supporting SI initiatives. In other words, understanding when a public actor interprets their roles as supporting the public and collective good and uses them in new ways and with innovative activities and relationships. Thus, this research distinguishes between two variances - the type of role and the use of the role. While the type of role is more related to the organizational role, the use of role is more related to the actor's utilization of the role to access resources (Callero, 1994).

4.3.3 Methodology and methods

To explore the role of public actors in the development of forest-based SI we conducted an in-depth case study of reconfiguration of charcoal burning practice that started in Dole pri Litiji (Central Slovenia). Case study research method is "an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (Yin, 1984, p. 23). A single case study is the most appropriate method to study the same single case through the time (Yin, 2009, pp. 46–51), thus suitable for studying the involvement of public actors in the reconfiguration of charcoal burning practice during the span of 20 years and observing changes. Data collection and analysis were composed of four nonlinear, loosely

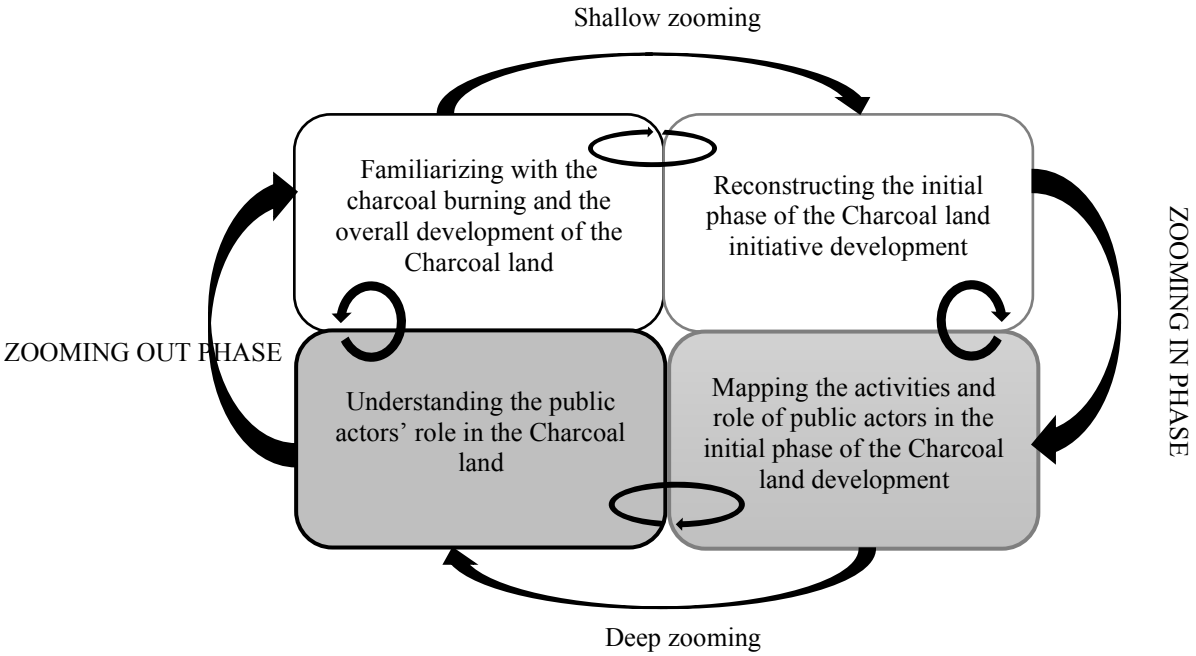

Figure 12. Interrelations of zooming-in and zooming-out phases (Own elaboration based on Nicolini, 2012)

organized and iterative phases: shallow and deep zooming in and shallow and deep zooming out (Nicolini, 2012) (Figure 12). Shallow zooming consisted of two phases: zooming in and zooming out. Through shallow zooming out we first got familiar with the overall development of the Charcoal Land initiative, and reconfigurations of the charcoal burning practice over 20 years. This was crucial for deciding on what to focus on the zooming in phase – the preparatory action and the first reconfiguration of charcoal burning practice. Shallow zooming in phase enabled us to gain an in-depth understanding of the first 3 years of the Charcoal Land initiative development identifying major events. Deep zooming started with zooming in phase, in which we identified public actors and their role types based on their activities in the identified events. Deep zooming in was followed by a deep zooming out phase that enabled us to understand how public actors used their role as a resource for gaining access to cultural, social or material capital necessary for the success of the Charcoal Land initiative.

4.3.3.1 Data collection

To methodologically triangulate our data (Denzin, 2017) we relied on three data collection methods: key informant interviews (KII), document review, and semi-structured interviews (SSI).

Key informant interviews (KII) were unstructured, as the lead researcher maintained a minimum control of the informant's response, with the purpose was to let the key informant

(the leader of the initiative) tell the story of the Charcoal Land initiative (Whitehead, 2005). The lead researcher conducted 5 different interviews with the key informant (KII 1-5) during the first half of 2018. The interviews lasted from 1 – 4 hours and were recorded and transcribed. In the first interview, the key informant told the overall story of the Charcoal Land initiative and the reconfiguration of the charcoal burning practice. The second conversation focused on the identification of crucial events, while the following three conversations then went into detail in each event, a description of a situation, and the identification of involved actors and their role.

Document review consisted of going through and chronologically sorting 9 registers of documents (about 3 000 sheets). Archive documents (AD) contained e-mail correspondences, notes, minute meetings, idea drafts, project proposals, calls for projects, media publications, invitations, journal articles, posters, tickets, etc. After sorting, we read each document, conducted the content analysis and entered the extracted data in an Excel file. Extracted data included: Id of the document (AD Id), original title, year, month, date, location, document type, from (person or organization), to (person or organization), aim, reason, summary of the content, event, activity, data on actors mentioned in the document (person, organization, organizational role, activity role), prevailing narrative in the document, and researcher's comments.

Finally, we used semi-structured interviews (SSI) with key public actors in the Charcoal Land initiative to validate findings from document review and key informant interviews, as well as to investigate what narratives the key actors supported and why. Semi-structured interviews are the ones in which the researcher has a written list of guiding questions and topics that need to be covered but tries to maintain low control over the interview (Whitehead, 2005). Each interview was adapted to the respondent, although the central topic stayed the same evolving around the actor's involvement in the Charcoal land initiative. Guiding questions focused on the involvement of actors in the events of the Charcoal land initiative, the role of the individual actor and its organization, the reason for the involvement, the collaboration with other actors, the problems faced and how they were solved. We conducted 20 semi-structured interviews (SSI) during 2018 – 2019 in the duration of 30 to 90 minutes. Fourteen interviews out of 20 were recorded[15] and transcribed. For the rest 6 interviews that were not recorded, we took the notes during the interview itself.

[15] Before the interview, each respondent was asked to read and sign the Interview statement which described the purpose of the research, the need for the interview, use of the data. Each respondent was given the possibility to indicate: if (s)he wants to stay anonymous, if (s)he agrees with recording the interview, if (s)he agrees with the use

4.3.3.2 Data analysis

Our main method for analyzing the data was the event-sequence analysis (ESA) (Spekkink, 2013). ESA is a research approach suitable for the systematic longitudinal analysis of process phenomena. Sequence refers to the temporal order of things, while events refer to elements in that sequence (Abbott, 1990, pp. 376–377). The process is "a sequence of events that describe how entities emerge, develop and possibly dissolve over time. To define something as a process is to define a central subject as well as the different types of events that the central subject endures or makes happen" (Spekkink, 2013, p. 345). This approach is particularly suitable for exploring the role of public actors through the activities of the Charcoal Land initiative, as it allows for defining the central subject as a dynamic and dispersed agency that might evolve through time as a result of the events it endures. In our case, a central subject is a group of actors involved in the development of the Charcoal Land initiative. Although a central subject was composed of a group consisting of individual and organizational actors, in our data analysis and discussion we particularly focus on public actors. The sequence in our case is then the temporal order of real-life events that the above-mentioned group of actors realized during the process of the Charcoal Land initiative development. Each event consists of a set of incidents – an empirical description of activities that led to an event. For analysis of the data, we used visual mapping in combination with narrative analysis. After visually mapping the events and actors' activities in them, we used narrative analysis to understand how a few initial actors used their role to persuade other actors to join the initiative, and in this way obtained access to new resources for further activities and organization of the events.

Narrative analysis is an approach "that is concerned with understanding how and why people talk about their lives as a story or a series of stories. This inevitably includes issues of identity and the interaction between the narrator and the audience(s)" (Earthy and Cronin, 2008, p. 424). By looking into 'small stories' produced during the meetings and other events, we focused on narratives-in-interactions, and how they were used to support the development of the Charcoal Land initiative. As production of the story is always a social interaction, 'small stories' or 'narratives-in-interactions' are "joint actions involving three groups of people: *the producers, the coaxers, and the consumers*. This approach to narrative analysis shifts the emphasis away from seeing a story as representative of individual life to a focus on the social production and consumption of the story" (Earthy and Cronin, 2008, p. 426).

of the data, and if (s)he wants to receive the results of the research. On this way, we obtained the consent for using the personal names of the most of our interviewees, although we use only initials in our publications.

In our case, *the producers* are the individual public actors that used certain narratives to tell the story of charcoal burners and the Charcoal land. They purposefully used the particular theme of a narrative to highlight the benefits of charcoal burning for 'something' (e.g. sustainable forest management, rural development, cultural identity). In interactions with other actors, producers used certain themes of the narrative around which they constructed the story in the context using it to obtain the support of the other actors, access certain resources or fulfill their aims. *'Coachers' or 'coaxers'* are the ones that provided a forum for producers to become a storyteller. In our case, those are individual public actors that co-constructed certain themes of the narratives and deployed them in further interactions, thus helping producers to access the resources. The third group is *consumers* that had an active role in the consumption of certain themes of the narratives. In our case, those are the public organizations towards whom certain narratives were directed, they are the audience for 'the story', whose official support was needed for the success of the Charcoal Land initiative.

4.3.4 Analysis and Results

This section presents the analysis and results. Event-sequence analysis chronologically lays down the basis for understanding the engagement of public actors and their roles in the first three years of the Charcoal Land initiative development by chronologically detailing the events and engagement of public actors in the activities (section 4.1). Then, we explore the role of organizational and individual public actors in this phase of the initiative development (sub-section 4.2)

4.3.4.1 The preparatory phase of the Charcoal Land initiative (event -sequence analysis 1999-2001)

1999 – 2000 Idea initiation (Figure 13*)* – In 1999, Mr. J.P. – a district forester employed by State Forest Service (SFS), noticed and brought the charcoal burning idea to his work colleague, Mr. Z.K. Two of them were developing the charcoal burning idea for several months. Their main idea was that charcoal burning, as a traditional practice, is something special for the area and people of Dole and can be only preserved if charcoal burners practice it (KII1, SSI1). In parallel, during his terrain work, Mr. J.P. visited several active charcoal burners asking them if they would be interested to revive the charcoal burning practice. In discussions with them, Mr. J.P. highlighted the tradition of charcoal burning and that charcoal could be an additional source of income (KII1).

In September 2000, Mr.J.P. and Mr. Z.K. wrote down their idea in a few pages document called *Charcoal burning in Dole* (Slo. *Ogljerjenje na Dolah*). In October 2000, Mr. J.P. and Mr. Z.K. presented this project idea to Mr. D.F. - the leader of the local unit Radece of State Forest Service (SFS LU Radece) and to Mr. N.R the leader of the regional unit Brezice of State Forest Service (SFS RU Brezice). One of their main arguments was that Dole is having a 70% of the forest with a high share of afforested agricultural land, and charcoal burning can contribute to fighting afforestation of agricultural land (SSI1). They obtained the official support of both directors and approval of SFS RU Brezice to continue with the project idea development (KII1, SSI1, SSI7). Mr. J.P. and Mr. Z.K. further discussed their idea with Mr. D.M. – the president of Local community Dole (LC Dole) highlighting that charcoal burning could contribute to the development of local community and engage charcoal burners in community life. Mr. D.M. gave them the support of LC Dole.

The support of SFS, LC Dole and charcoal burners enabled Mr. J.P. and Mr. Z.K. to write and send an official invitation for the meeting to Ms. J.V. – the teacher of the Primary School - Unit Dole (PSU Dole), and Mr. R.B. – the leader of Chamber of Agriculture and Forestry – Unit Dole (CAFU Dole) in the name of SFS and LC Dole. The meeting was held shortly after they sent the invitation. The meeting attended a few charcoal burners, the leader of SFS LU Radece, the leader of SFS RU Brezice, the teacher of PSU Dole, the leader of CAFU Dole, and the president of LC Dole. Mr. J.P. and Mr. Z.K. presented their idea. As the attendants supported and engaged with the presented idea, the meeting resulted in an outline of major goals and activities for the revival of charcoal burning in Dole (KKI1, SSI1, SSI14, SSI17). Participants in this meeting agreed to start with the intensive public promotion of charcoal burning in the year 2002. They planned a number of activities for 2001, which should make the basis for successful promotion in 2002. They included:

1) Establishment of Management Board for *Charcoal burning in Dole* project within Cultural and Art Society (CAS) Dole
2) Mobilization of all charcoal burners in Dole
3) Awareness-raising of local inhabitants about the benefits of charcoal burning
4) Development of Charcoal path as a thematic hiking path
5) Preparation of book detailing cultural heritage (and with it connected charcoal burning) of Dole
6) Financing of predicted activities

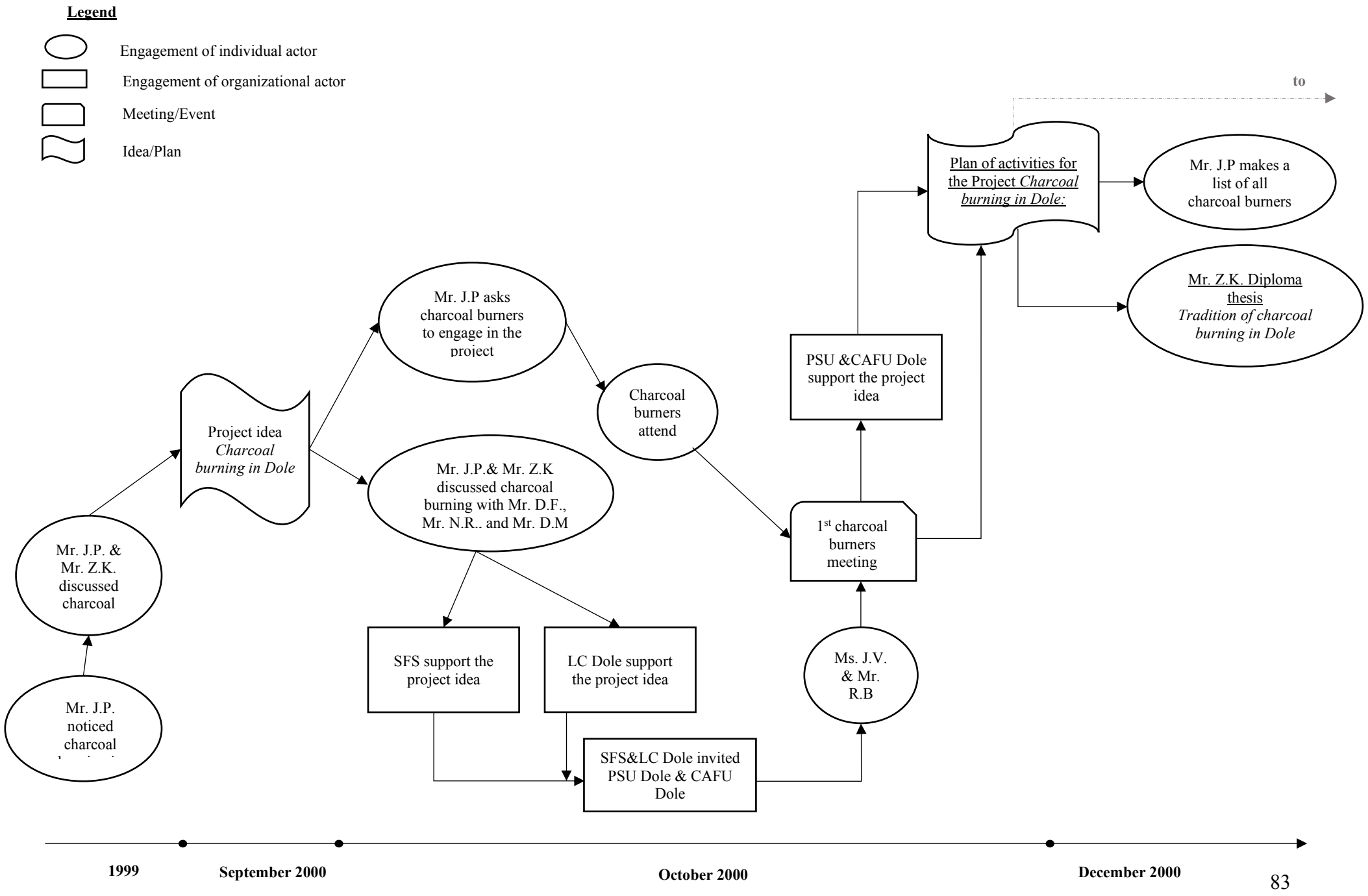

Figure 13. Event sequence analysis for the years 1999 -2000 (Own elaboration)

After this meeting, Mr. J.P. made a list of all charcoal burners in Dole with their contacts. At the same time, Mr. Z.K. started to gather information about charcoal burning in Dole, which

included the detailed description of the traditional charcoal burning technique (which was not documented before), the willingness of charcoal burners to engage in the project, etc. This information served a twofold purpose: it was used in the diploma thesis of Mr. Z.K., as well as a material for the book about Dole (SSI1).

2001: Development of novel idea (Figure 14) – The 2nd charcoal meeting took place in February 2001, and charcoal burners in Dole established Charcoal's board. This board gained legal status as the Section for the Preservation of Natural and Cultural Heritage (Section for PNCH) under the Sports Club Dole pri Litiji (SC Dole), during the 3rd charcoals meeting. Elected president of Section for PNCH was Mr. J.P. From this point on, charcoal burners in Dole became organized and able to officially work on their planned activities as they obtained the legal entity that enables them to access resources (SSI2, SSI3).

Mr. M.K – the Mayor of the Municipality of Litija, and Mr. C.V. – the director of the PS Dole attended the 3rd Charcoals meeting. Mr.J.P and Mr.Z.K. presented the charcoal burning in Dole as part of the cultural

and natural heritage of the area. Their argument for the revival of the traditional charcoal burning was that it can make a basis for the development of educational and touristic activities and thus increase the income. Mr.M.K. and Mr. C.V. supported the charcoal burning idea in the name of their organizations (SSI13, SSI19). At the same meeting, Mr. J.P. proposed to connect the charcoal burning and the start of the project *Charcoal burning in Dole* with Forest Week 2002 (KII2).

4th Charcoal Meeting in May attended representatives of all until then involved organizations (SFS, LC Dole, Municipality of Litija, CAFU Dole, and PSU Dole). The meeting resulted in two major ideas: one was to attract Municipality of Litija to be one of the main sponsors of charcoal related activities during the Forest Week 2002, and the other was to make the charcoal burning the central topic of the Forest Week 2002 (AD ID11). In that way, the project idea *Charcoal making in Dole* would get big media promotion and necessary resources to implement activities proposed in 2000 (KII2). This influenced the initiative by orienting actors to plan their further activities in relation to Forest Week 2002.

5th Charcoal Meeting took place in June 2001 as a part of a bigger meeting on Sports Club Dole and Section for PNCH. On that meeting, it was decided that charcoal pile ignition in Dole

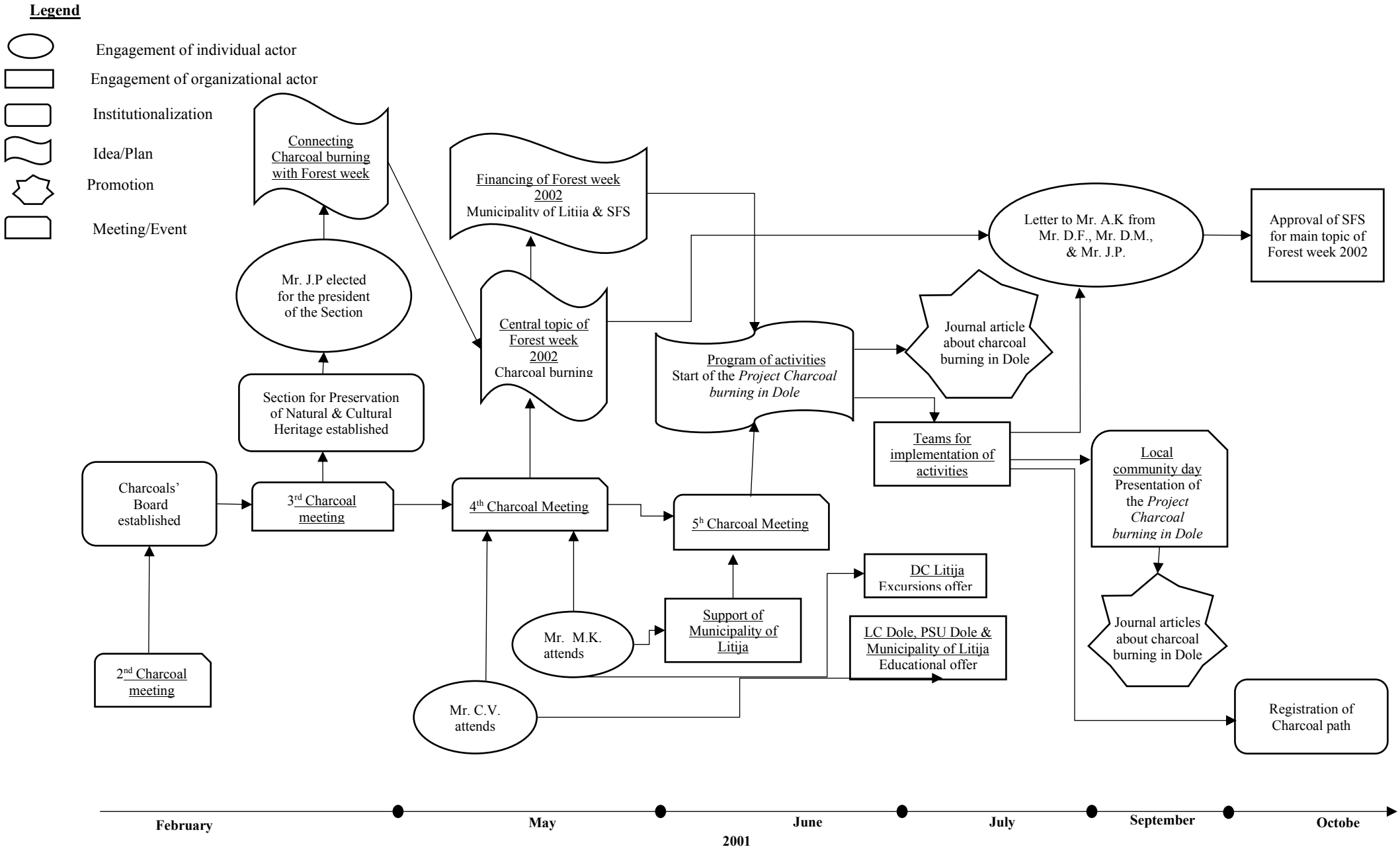

Figure 14..Event sequence analysis for the year 2001 (Source: Own elaboration)

should be the central event of Forest Week 2002 (if the idea for charcoal burning as a central topic gets accepted and further supported).

In the name of the Section for PNCH, Mr. J.P. presented the program of activities for starting the Project Charcoal burning in Dole. Those activities included: charcoal pile ignition as the central event of Forest week 2002, roundtable with charcoal burners, art, literature and photo competitions, Charcoal path excursion, and preparation and announcement of Book about Dole. For each activity teams consisting of several persons were proposed. The members of the teams were charcoal burners, local inhabitants and representatives of organizations (SFS, LC Dole, SC Dole, PSU Dole, Municipality of Litija, CAFU Dole) (AD ID12 – 14).

After this meeting, teams started work on the preparations for the celebration of Local community day and Forest Week 2002. In July 2001, the educational offer was prepared by PSU Dole and Municipality of Litija and sent to the primary schools in the Municipality (AD ID 14). Content and offer for excursions were drafted and promoted by DC Litija. Educational offers and excursions were aimed to gather some funds that could be further used for creating promotional materials and other necessities and to raise the awareness of inhabitants in the Municipality and broader (KII2, SSI3, SSI6).

In September 2001, Mr. D.F., Mr. D.M., & Mr. J.P. sent a letter to Mr. A.K – the director of the central unit of SFS, proposing charcoal burning as a central topic of Forest week 2002. Also, Local community day took place in September 2001 as a manifestation that gathers local inhabitants to celebrate with music and food. It was used to announce the charcoal idea publicly to all inhabitants of Dole. As Mr. J.P. explained it, that was "necessary to validate our idea to see if people like it and want to support it. If they do not support it, all was in vain. And what is a better way to do it, then their way – Local community day." (KII2). As a representative of SFS and Section for PNCH, Mr. J.P. presented the charcoal burning idea which was were positively accepted (KII2, SSI1, SSI2, SSI3, SSI13, SSI14, SSI15, SSI16, SSI17) As a central event during Local community day celebration was the ignition of the charcoal pile it attracted media attention, and media articles about charcoal burning in Dole were published by newspaper journals (AD ID15, 18, 19).

In October 2001, the team working on the Charcoal Walking path finalized the works and officially registered it as an educational hiking trail. In the same period, Mr. A.K accepted the proposal and SFS officially decided to theme the Forest week 2002 as *Traditional and old forestry practices*, with charcoal burning as the central topic.

4.3.4.2 Role of public actors in preparatory action of the Charcoal Land initiative

The preparatory action of the Charcoal Land initiative (1999 to 2001) was characterized by the conception of the novel idea (years 1999-2000) and its development (the year 2001). During this period, the preliminary movement of charcoal burning revival was driven by a small group of actors that held a number of meetings, where deliberation and exchange of ideas about the Charcoal land initiative took place. This small group of actors was composed of actors coming from the civil and public sector.

Within this group, we identified 5 organizational and 10 individual public actors involved in the preparatory phase of the initiative (Table 8), from which we mostly focus on crucial organizational and individual public actors.

Table 8.Organizational and individual public actors involved in Charcoal Land initiative 1999-2001 and their roles

Organizational actor	**Individual actor**	**Organizational role of the individual actor**	**SI role of the individual actor**	**Engagement of individual actor in SI activities**
State Forest Service Local Unit Radece (SFS LU)	Mr. J.P.	District forester	Innovator	Ideation Planning Analyzing Communication Promotion
	Mr. Z.K.	District forester	Innovator	
	Mr. D.F.	Leader of the local unit	Follower	Administration Legitimization Promotion
State Forest Service Regional Unit Brezice (SFS RU)	Mr. N.R.	Leader of the regional unit	Follower	Coordination Legitimization Promotion
State Forest Service, Central Unit (SFS CU)	Mr. A.K.	Director	Follower	Legitimization Promotion Financing (in-kind)
Local community (LC) Dole	Mr. D.M.	President	Follower	Communication Organization Planning Promotion
Municipality of Litija	Mr. M.K.	Mayor	Follower	Legitimization

				Promotion Marketing Financing
Chamber of Agriculture and Forestry (CAF) - Unit Dole	Mr. R.B.	Unit leader	Follower	Organization Marketing Promotion
Primary School (PS) Gabrovka	Mr. C.V.	Director	Follower	Legitimization
Primary School Gabrovka – Unit Dole (PSU Dole)	Ms. J.V.	Teacher	Follower	Planning Organization Promotion

Source: Own elaboration

The most crucial organizational public actor was State Forest Service (SFS), as it was one of the most engaged public organizations that supported the Charcoal land initiative from the very beginning of the initiative's development. SFS is a public organization established by the Republic of Slovenia and performs a public forestry service in all forests of Slovenia, regardless of ownership. SFS is tasked with forest management planning, cultivation, and protection of the forest, forest monitoring, popularization of forestry, as well as supporting and educating private forest owners (Government of Slovenia, 2016). It is organized into 1 central, 14 regional (RU), 69 local units (LU), and 396 forest districts (Zavod za gozdove Slovenije, 2017). On the level of the forest district, district foresters are in contact with private forest owners, providing advice and expertise (Aurenhammer et al., 2018).

SFS as an organizational actor engaged in the Charcoal Land initiative by providing the expertise necessary for forestry-related activities of the initiative (e.g. construction of the Charcoal path, analysis of available natural resources. Also, SFS used synergies between forestry-related events and initiative activities to support them in planning, as well as to promote and finance some events and activities. Most importantly, by officially engaging in the initiative activities SFS contributed to the public image of the initiative and legitimized its actions.

SFS as an organizational public actor became involved in the Charcoal's Land initiative activities through the involvement of individual public actors and their organizational roles (please, see Table 8). This becomes evident especially in the year 2001 when individual actors

organized into smaller teams. Those teams were composed of individuals who had contact with or were employed by organizations that were identified as important stakeholders that could have the interest to support the initiative activities (KII2, SSI1, SSI13, SSI14, SSI15). For example, the team working on the development of the Charcoal Path consisted of representatives of SFS LU Radece, SFS RU Brezice, LC Dole, and charcoal burners. While SFS had the expertise to plan and conduct the architecture of the Charcoal Path, LC Dole obtains necessary permits through connections with the Municipality of Litija. charcoal burners provided the machinery and conducted most of the construction works.

The most important individual public actor for the development of the Charcoal land initiative was Mr. J.P. - a district forester employed by SFS (SSI 1-20). Mr. J.P. was able to engage in the Charcoal Land initiative activities due to his organizational role. As a district forester, he noticed that charcoal burning was still practiced in Dole and made the connection with the local community, taking the role of an innovator in SI. Due to the many years of working in the community, and his good reputation, Mr. J.P. had a high trust of local inhabitants, which enabled him to successfully initiate the revival of charcoal burning practice and to engage in the development of the Charcoal Land initiative. “You know, you need somebody like Joze, who people here know, respect and trust” (KII 15).

He was able to co-develop the charcoal burning idea and to successfully communicate with charcoal burners as well as public actors due to his good knowledge about what they value, and what they might be willing or able to officially support. When we asked Mr. J.P. how he knew who to address and how, he replied “Well, I knew all those persons from before. I worked in this LU since the 1980s. I knew who they are, where they live and work, what they value, and what they might support” (KII 2).

Being elected for a President of the Section for Preservation of NCH, Mr. J.P. got another role (besides the organizational role of regional forester). This new role enabled him to communicate the ideas and to lobby for support of other organizations in the name of charcoal burners, while the organizational role allowed him to represent the interest of SFS (SSI7). Thus, Mr. J.P. had multiple roles (district forester, innovator, president of Section for PNCH) that he strategically used to address obtain other individual public actors and obtain their organizational support. In the light of those roles, he had to report to both organizations, SFS as well as to Sports Club (SC) Dole under which Section for PNCH was functioning. When reporting to SFS, Mr. J.P. had to report the working type of the task-relevant for the SFS (i.e.

support to private forest owners), working hours spent, as well as the use of the material resources.

The tacit knowledge that Mr. J.P. obtained due to his roles enabled him to co-produce a narrative about charcoal burning and to strategically use certain themes to persuade and 'win' the individuals he was addressing. During the period of 1999-2001, we identified 7 major recurring themes in the narrative that charcoal burning was connected to. Table 9 provides an illustrative example of narrative-in-interactions, a short name of each major theme, as well as public actors that acted as producers, coaxers, and consumers.

Table 9. Themes used to construct the narrative of traditional charcoal burning and public actors as their producers, coaxers, and consumers

No	Example	Theme	Producers	Coaxers	Consumers
1	*"Charcoal burners are private forest owners who manage their forests. Charcoal burning can help us in reducing the afforestation of agricultural land."* (AD ID2)	**Charcoal burning for active private forest owners**	Mr. J.P. Mr. Z.K.	Mr. D.F. Mr. N.R. Mr. D.M.	Mr. A.K. (SFS central unit) Mr. R.B. (CAFU Dole)
2	*"For charcoal, people in Dole use low quality wood, obtained from silvicultural works. Today, they manage their forest in a sustainable way."* (AD ID2)	**Charcoal burning as a contributor to sustainable forest management**	Mr. J.P. Mr. Z.K.	Mr. D.F. Mr. N.R.	Mr. A.K. (SFS central unit)
3	*Charcoal selling can be an additional source of farm income, and thus increase the income of rural inhabitants."* (AD ID4)	**Charcoal burning for increasing income**	Mr. J.P. Mr. Z.K.	Mr. R.B.	Mr. D.M. (LC Dole) Mr. M.K. (Municipality of Litija)
4	*"In Dole, there are still 20 charcoal piles burning every year. This is, without any doubt a valuable cultural and natural heritage."* (AD ID2)	**Charcoal burning as cultural and natural heritage**	Mr. J.P. Mr. Z.K. Mr. D.M.	Ms. J.V. Mr. D.F. Mr. N.R.	Mr. C.V. (PS Gabrovka - Dole) Mr. A.K. (SFS central unit) Mr. M.K. (Municipality of Litija)

5	*Our idea is to bring back to people the sense of worth, the feeling they know and do something special and unique.* (AD ID4)	**Charcoal burning for giving people a sense of worth**	Mr. J.P.	Mr. D.M. Ms. J.V.	Mr. M.K. (Municipality of Litija) Mr. C.V. (PS Gabrovka - Dole)
6	*By getting recognizable, charcoal burning can attract people into the area, and we could offer many touristic activities, such as Charcoal path, or workshops* (AD ID5)	**Charcoal burning as a touristic activity**	Mr. J.P. Mr. Z.K.	Mr. D.M.	Mr. M.K. (Municipality of Litija) Mr. R.B. (CAFU Dole)
7	*This way, our charcoal burner is not just an active forest owner, but also a teacher of how to interact with forest and nature* (AD ID2)	**Charcoal burning and education**	Mr. J.P. Ms. J.V.	Mr. D.F. Mr. N.R. Mr. C.V. Mr. D.M.	Mr. A.K. (SFS central unit) Mr. R.B. (CAFU Dole) Mr. M.K. (Municipality of Litija)

Source: Own elaboration

In presenting the charcoal burning Mr. J.P. used his knowledge about the local context and people, as well as the knowledge about SFS practices and procedures to highlight themes as to suitable and acceptable by the ones who listen. For example, when asking for official support and approval to develop charcoal burning idea Mr. J.P. first unofficially addressed Mr. D.F. - the leader of SFS LU Radece and Mr. N.R. – the leader of SFS RU Brezice, by focusing on the themes *Charcoal making for active private owners* and *Charcoal making as a contributor for sustainable forest development*. As both leaders got persuaded by the arguments, they further used them to address Mr. A.K. – the director of the SFS CU. By presenting important reasons for SFS to support the charcoal burning idea, Mr. D.F and Mr. N.R. became the coaxers of the narrative, while Mr. A.K. became the consumer of the narrative. Mr. A.K., as the representative of SFS, was further able to provide organizational support for the charcoal burning idea, as it was well aligned with the tasks, interests, and regulations of SFS. Through his engagement, SFS became the consumer of the narrative.

Some coaxers supported the idea because at that time it seemed that the idea had a perspective. "…[i]t was a good idea. Joze has many ideas, and although not all of them are good, most of

them are. And what is even more important, Joze knows how to make them happen" (SSI7). Other coaxers and consumers supported the idea as it was in the interest and responsibility of their organization, to support it. "I do not remember much of that period, you know…I am old and my brain does not work as it was, so I cannot tell you anything special about it, but for sure I had the interest to support it" (SSI22). As another public actor who succeeded the interviewee 22 put it "We had to invest in that area. It was a marginalized and underinvested area, and the inhabitants themselves did a lot to preserve the life there. But their efforts were not enough, so when the charcoal burning idea came to us, we had to support it, it was in our responsibility. So, after that, we started working on the infrastructure" (SSI17).

4.3.5 Discussion

Besides civil actors (which are not the object of our analysis) individual and organizational actors coming from the public sector were involved in the preparatory action (1999-2001) of the Charcoal Land initiative. The charcoal-burning idea was conceived by 2 individual actors – the innovators in 1999, who engage 8 more individual public actors – the followers in 2001, pointing to the dynamic, collective and distributed nature of SI (Górriz-Mifsud et al., 2018; Haxeltine et al., 2016; Secco et al., 2017b). The innovators and followers were individual actors employed by 5 public organizations.

The individual actor with a crucial role in the development of the initiative was Mr. J.P. who had an organizational role as a district forester. He had observed that the dying practice of traditional charcoal burning was still practiced in the local area and co-developed the initial idea for its revival. In this activity, he showed the traits of intentionality, self-reflexiveness, and self-reactiveness (Bandura, 2001). "You always need to have a story. We had a good story to tell, but we never tried to bang our head against the wall." (KII1). Due to the active engagement in the ideation of the charcoal burning revival and the Charcoal land initiative, Mr. J. P. had the role of an innovator in the SI initiative.

Due to the organizational role as district forester, Mr. J. P.had a good knowledge of the local inhabitants, local conditions, and SFS practices (Aurenhammer et al., 2018). Additionally, he had the inhabitants' respect and trust. Organizational role and a good reputation enabled Mr. J.P. to behave like a proxy agent in attracting his organization to take official involvement in the Charcoal land initiatives' development (Bandura, 2001). In this way, the organizational role of the innovator served as a bridge between the local community and public organization, pointing to the significance of the local involvement of proxy agents

Several other individual public actors (the followers) engaged in different preparatory activities of the initiative, based on their organizational roles, also acting as a proxy agent (Hewson, 2010). Those activities ranged from participatory planning of the events, coordination, administrating, and resourcing, etc. (please, refer to Table 6). From identified organizational actors, engagement of SFS was crucial for the success of the Charcoal Land initiative. SFS had a role in providing access to resources (human, financial, material, cultural) and legitimized the initiative (Górriz-Mifsud et al., 2018; Secco et al., 2017b), which corresponds to their legal tasks and jurisdiction of support to private forest owners and popularization of forestry (Aurenhammer et al., 2018)

Mr. J.P. was the co-producer of the narrative creating and using 7 themes that presented traditional charcoal burning as useful for *activating private forest owners, sustainable forest management, increasing income of rural inhabitants, preserving cultural and natural heritage, giving charcoal burners sense of worth, tourism development, and education*. Individual actors acting as proxy agents with the highest organizational roles (i.e. the director of SFS, the leader of LC Dole, the Mayor of Municipality of Litija) recognized their organizational values or goals in many themes charcoal making was connected to (Hilbert, 1981). "When you put things like that and present the idea [of charcoal burning] in a way that is good for everything, there is no director or politician who is going to refuse to support it. We are not crazy to work against ourselves" (SSI8, square brackets added for clarification). Proxy agents thus identified organizational values or goals in the particular themes, and from consumers became the coaxers of the narrative. They established collaborations necessary for further development of the Charcoal land initiative, taking multiple roles in the initiative activities (please, see Table 8).

Regardless of the themes used to attract individual public actors, the support provided by the respective organizational public actors was to some extent limited by the existing structures and rules in place (Lynch, 2007). Individual public actors, as a proxy agent of their organizations, had to respect the rules and laws in place. Acting against the rules and laws would put in jeopardy the position of the individual actor itself and harm the reputation of the organization. " We were able to support it [the idea] and be flexible, as there is nothing in the Law on Forests or our rulebook that it was against it. But we could not give any financial support at that time, as it was not planned in our budget. Instead, we found other ways to provide them what they needed" (SSI 19, square brackets added for clarification).

The structure did not totally inhibit the actions of the organizational public actors, as individual actor draws upon direct personal agency and used their organizational role in alternative ways

to provide the Charcoal Land initiative necessary resources (Callero, 1994; Sewell, 1992). The flexibility reflected for example in finding ways to provide in-kind resources instead of monetary financing (i.e. instead of paying the Charcoal Land initiative to make promotional material, SFS designed and printed the brochures about traditional Charcoal burning as a part of promotional material for Forest Week 2002). "As I said to you before, we never tried to bang our head against the wall. We always took into consideration what is possible, based on what each of us can do. We knew we need to be flexible, and creative to get what we need" (KII5).

Mr. J.P. had to report the purpose of the Charcoal land initiative activity and to justify how is his engagement in the activity connected with his organizational role. He enacted the role of a president of Section for PNCH after his official working hours, as the meetings usually took place in the late afternoons or during the weekends and provided reports to SC Dole under which the Section was registered. Thus, Mr. J.P. had several roles that he enacted as a proxy agent, while his dedication and innovativeness can be contributed to his direct personal agency.

4.3.6 Conclusion

In this article, we explored the variety of roles of public actors in a forest-based social innovation by looking at the preparatory action of the Charcoal Land Initiative– an SI initiative that used the traditional charcoal burning practices in Slovenia to create new rural opportunities. We identified 10 individual public actors and 5 organizational public actors that actively engaged in the initiative activities, thus acting as agents of SI.

We learned that organizational public actors had multiple roles within the scope of their mandated executive tasks that supported the development and implementation of this SI. Those roles ranged from planning, coordinating, advising to promoting and financing. We also learned that organizational actors acted through the proxy agents – individual public actors employed by those organizations. The most crucial individual public actor had the organizational role of a district forester, which enabled him to attract the support of his organization and to establish a connection with the local community with respect to the charcoal burning. The same individual actor exhibited a direct personal agency in idea development thus acting as an innovator in SI.

Individual public actors used their organizational and SI roles to co-produce the narratives that presented the story of charcoal burning in a convincing way. These narratives connected charcoal burning with sustainable forest management, rural development, cultural heritage and

a sense of worth, making it appealing to the consumers of the narratives. The producers of the narratives then used their organizational roles to strategically attract the support of their public organizations and access resources needed for the Charcoal Land Initiative.

The engagement of organizational public actors was to some extent limited by the existing structure, as individual actors that acted as proxy agents had to respect the existing laws and regulations. Regardless of that, those actors showed high flexibility and creativity as they found a way to support the initiative. The reason for supporting the initiative was very often within their own interests as proxy agents and well-aligned with the organizational goals.

We conclude that in the case of the Charcoal Land Initiative organizational public actors used capacities and roles to create a new initiative based upon social innovation. While the acting of proxy agents allowed individual actors to obtain organizational resources, the personal agency of specific individual actors was crucial to successfully navigate existing rules and structures to develop new practices with new narratives in the context of traditional practice.

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4.4 Study 4: Implications of policy framework conditions for the development of forest-based social innovation in Slovenia

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4.4.1 Abstract

Regardless of the crucial role of civil society in social innovation, European Union (EU) social innovation concepts emphasized market-economic features rather than social by prioritizing social business over social movements. By emphasizing the economic features of social innovation, social enterprises, as ventures with both social and economic goals, are frequently associated with social innovation, especially in the developed economies. As an EU member country, Slovenia needed to adjust its policies to the EU social innovation concepts. Bearing in mind the EU interpretation of social innovation and the significance of state policies for its development, our aim is to investigate the policy framework conditions for the development of forestry-based social innovation initiatives in Slovenia. We found out that the prevalent economic understanding of social innovation reflects in Slovenian policy documents by equating social innovation with social enterprise. In this sense, the view of social innovation as both a growth engine and a way for solving societal problems translates into explicit statements on social innovation in cohesion policy documents and progresses by the operationalization of social innovation through indicators solely on social enterprise. Within the regulatory framework on social entrepreneurship, social enterprise is defined strictly with respect to legal forms, activities, profit sharing, and governance, imposing barriers to registration and development. Similarly to cohesion policy, the Rural Development Programme embraces a market-oriented understanding of social innovation and focuses explicitly on social enterprise. Forest policy documents do not explicitly mention social innovation or social enterprise. This is reasonable for documents adopted before 2011 when social innovation and social enterprises became a part of the prevailing discourse in Slovenia. However, newly adopted forest policy documents also do not integrate either social innovation or social enterprise. As forestry-based social innovation initiatives cannot be officially recognized as such, there are two possible ways for them to develop. The first applies to market-oriented, forestry-based social innovation initiatives that offer new products or services. Such initiatives can register as social enterprises and mobilize resources they can access within the social entrepreneurship regulatory framework and the Rural Development Programme measures explicitly addressing social enterprise. The second way addresses forestry-based social innovation initiatives that are not market-oriented. Those initiatives will have to navigate through policy framework conditions for resources available through the Rural Development Programme and forest policy instruments that target cooperation and networking.

Keywords: social innovation; forestry; social enterprise; policy conditions; regulatory framework; Slovenia

Highlights

- Slovenian policy documents embrace an economic understanding of social innovation (SI)
- Analyzed policy documents equal SI with social enterprise (SE)
- Forest policy documents do not explicitly mention SI or SE
- Market-oriented forestry-based SI initiatives can register as SE
- Instruments for cooperation can support non-market oriented, forestry-based SI initiatives

4.4.2 Introduction

Regardless of numerous definitions of social innovation (SI), its essence is in bringing positive change and transformations to society (Bosworth et al., 2016; Grimm et al., 2013; The Young Foundation, 2012; Hubert, 2010; Mulgan et al., 2007). Positive and innovative change through SI is achieved by the voluntary engagement of civil actors resulting in a change of practices that benefit wider society. In that sense, SI can be defined 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" (Polman et al., 2017). Reconfiguring of social practices refers here to the intentional process of change of behavior and actions of a variety of actors, creating new products or services, new relationships, new institutions, and/or new organizational forms. That is why we understand social enterprise (SE) as being one of the possible organizational forms of SI, while we acknowledge that every SE is not necessarily an SI.

Although the phenomenon of SI has been familiar for centuries (Edwards-Schachter and Wallace, 2017; Baker and Mehmood, 2013), the European Union embraced the term SI less than two decades ago as a promising solution to many contemporary social and environmental problems (economic crises, welfare, migration, rural depopulation, etc.) (Edwards-Schachter and Wallace, 2017; Moulaert et al., 2017; Nicholls et al., 2015; Pisano et al., 2015; Moulaert, 2013). Until 2010, SI was a concept used in innovation systems, community development and social economy research but with a marginal role in the making of EU SI policy (Moulaert et al., 2017, p. 19). After 2010, the European Commission (EC) started shaping the EU SI concept

through several documents and initiatives, namely the Social Business Initiative (DG Growth, 2011), Social Innovation Europe (2011), and Social Investment Package (DG Employment and Social Affairs, 2013) (ENSIS – European Network for Social Innovation and Solidarity, 2018.).

Regardless of the crucial role of civil society in SI, the EU SI concept emphasized market-economic features of SI rather than social ones in transforming the welfare state (Sabato et al., 2017; Fougère and Harding, 2012; Cools 2017; Fougère et al., 2017) by prioritizing social business over social movements (Moulaert et al., 2017). The EU SI concept focused to a significant extent on efficiency, effectiveness, and budgeting of social investments, and relied on metrics and indicators (European Commisssion, 2013; Jenson, 2017; Moulaert et al., 2017). In that way, the EU SI concept took a rather neoliberal view of SI (Fougère et al., 2017), often undermining the relevance of the broader socio-political context for the development of bottom-up SI initiatives (Demming, 2016; Moulaert et al., 2017). By emphasizing the economic features of SI, social enterprises (SE), as ventures with both social and economic goals, frequently became associated with SI (Szijarto et al., 2018), especially in the developed economies (Chalmers, 2012).

As an EU member country, Slovenia needed to adjust its policies to the EU SI concept. Bearing in mind the EU interpretation of SI, and the significance of state policy on SI development (Mikhailovich Sergey et al., 2017; Eriksson et al., 2014) we need to investigate if and how Slovenia integrated the EU SI concept in its policy documents. Indeed, Slovenia started introducing regulations on SI in 2011, first with the Law on Social Entrepreneurship, followed by other strategic documents. As a result of Slovenian efforts, in 2018 there were 258 registered social enterprises (SE), of which just one was registered for forestry-related activities (Ministry of Economic Development and Technology, 2018).

With the increasing discourse on societal interest in the social and ecological roles of the forest, and the expanding political support for a bio-economy, forest resources have a growing potential for innovation and new business opportunities in a range of fields, including non-wood forest products, tourism and recreation, or new wood-based products (Winkel, 2017; Živojinović et al., 2017; Ludvig et al., 2017, 2016). Innovation support in the forest sector, however, tends to focus on timber production and process innovations and less on social or environmental activities (Weiss, 2013; Weiss et al., 2011; Kubeczko et al., 2006; Rametsteiner and Weiss, 2006).

In this paper, we focus on forestry-based SI initiatives, as Slovenia is the third most forested country in the EU, with 58.4% of forests (Zavod za Gozdove Slovenije, 2017). 76% of forests are privately owned and are mostly under managed (Pezdevšek Malovrh et al., 2015). The private forest sector is characterized by a high degree of property fragmentation (314,000 plots owned by 461,000 private owners) and small average size (approx. 2.5 ha) (Ministry of Agriculture Forestry and Food, 2017a; Poje et al., 2016). Private forest owners are mostly inactive and do not manage forests due to the low profitability of activities conducted on a small property (Pezdevšek Malovrh et al., 2015, 2012; Zavod za Gozdove Slovenije, 2017). In that respect, favorable policy conditions could stimulate the engagement of private forest owners in SI initiatives, creating collaborations and partnerships and diversifying their activities for social, environmental and economic benefits. These collaborations and partnerships could spin off new organizational and governance arrangements among state, private and civil actors related to forestry, thus transforming a hierarchically organized forest sector, and shifting the traditional understanding of forestry as a primary production branch of the economy (Liubachyna et al., 2017; Rogelja and Shannon, 2017; Secco et al., 2017; Brukas, 2015; Weiss, 2013; Buttoud et al., 2011).

Bearing in mind the potentials of SI in the forestry-based sector, our aim is to investigate the policy framework conditions for the development of SI initiatives in Slovenia. To achieve our aim, we were guided by two research questions:

1) How is the EU concept of SI reflected in Slovenian policy documents relevant to forestry?
2) What are the possible implications of Slovenian policy framework conditions for the development of forestry-based SI?

We start by describing our qualitative content analysis and interviewing methods. In section 3, we answer our first research question presenting how SI is addressed in Slovenian policy documents, triangulating our findings with interviews and previous studies on SI and SE in Slovenia. In section 4, we reflect on the implications of the policy framework conditions for forestry-based SI initiatives (second research question). In the end, we draw conclusions describing two possible ways for the development of forestry-based SI initiatives in Slovenia.

4.4.3 Methods

We used a qualitative deductive approach in this study, as we started from the already defined phenomenon of SI and strictly defined categories of policy instruments. We focused on the

content of policy documents, as they are written and negotiated plans of actions that prescribe policy instruments that should be used for delivery and implementation of the respective policies (Ludvig et al., 2017; Crabbe and Leroy, 2008; Fischer et al., 2007; Knoepfel et al., 2007). According to Vedung (1998, p. 21) "public policy instruments are the set of techniques by which governmental authorities wield their power in attempting to ensure support and effect social change". To distinguish amongst policy instruments, we started from Vedung's (1998) tripartite classification: regulatory, economic and information. We then borrowed from the quadripartite typology of Baldwin and Cave (1999) who, besides regulatory, economic and information instruments, introduced instruments for partnership and cooperation, which we named networking instruments. In this way, we distinguished among regulatory, economic, information and networking instruments, the definitions of which are provided in Table 10.

In policy terms, the topic of SI in the forestry-based sector is at the intersection of several policy sectors:

1) cohesion policy
2) innovation policy
3) rural development policy
4) forest policy
5) environmental policy.

We used these sectors as a starting point for the identification of potentially relevant policy documents. We identified the documents by searching websites of Slovenian governmental bodies. We screened these documents and selected those that were explicitly relevant for potential impacts on SI. In this way, we selected 18 policy documents, on which we applied content analysis.

Content analysis is "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use" (Krippendorff, 2004, p. 18). We applied qualitative content analysis, which is "is a set of techniques for the systematic analysis of texts of many kinds addressing not only manifest content but also the themes and core ideas found in texts as primary content" (Mayring (2000) cited in Drisko and Maschi (2016, p. 85)). The qualitative content analysis includes contextual information, latent content, as well as formal aspects of the analyzed documents. For analysis, we used official documents in the Slovenian language, where we first identified and coded the parts of the documents that:

1) explicitly use the term SI, or
2) explicitly use the term SE, or
3) implicitly refer to SI, in that they address the change of behavior and actions of a variety of actors aiming at the creation of new relationships, new institutions and/or new organizational forms.

Within coded parts addressing SI, we then identified and coded explicit policy instruments with the prescribed means for implementation, as well as statements that we understood as formal, but general proclamations on objectives, importance, needs, or instruments without prescribed means for implementation. We extracted coded elements into a standardized table, which enabled a simplified overview of relevant parts of the documents and their interpretation. As all documents we analyzed are in the Slovenian language, for illustrating our coding method we additionally coded an official English translation of the Operational Programme for the Implementation of the EU Cohesion Policy 2014-2020 (Annex D. *Example of qualitative content analysis of the Operational Programme for Cohesion Policy 2014-2020*). To ensure the validity of our findings, we triangulated our content analysis results by comparing them with previous studies on SI and SE in Slovenia (see Podmenik et al., 2017; Gartner et al., 2015; Hren, 2015; Konda et al., 2015) and results from the in-depth interviews. For the analysis, we applied the coding criteria presented in Table 10.

Table 10.Coding criteria, definitions, and rules

Coding category	**Definition**	**Coding rule**
SI	SI refers to the reconfiguring of social practices with the engagement of civil society actors and aims to enhance outcomes on societal well-being	• explicit mention of SI • explicit mention of SE • implicit referral to SI
S	statements refer to formal, but general proclamations on objectives, importance, needs, or instruments	• formal, but general proclamations on objectives, importance, needs, or instruments without prescribed means for implementation

RI	regulatory instruments (RI) include all formal regulatory or strategic documents and measures	• explicit prescription of regulatory instruments and means for their formulation and/or implementation
EI	economic instrument (EI) include financing mechanisms and schemes	• explicit prescription of types of economic instruments and means for their implementation
II	informational instruments are those used for informing, educating, training, and promoting	• explicit prescription of types of informational instrument and means for their implementation
NI	networking instruments (NI) are those used for establishing and developing cooperation	• explicit prescription of the type of networking instruments and means for their implementation

Source: Own elaboration based on Baldwin and Cave (1999), Vedung (1998) and Mayring (2014)

We conducted 11 in-depth interviews (E1-E11) in January-February 2018 with experts on SE, rural development and forest policy. We used the snowball technique for expert identification (Goodman, 1961). We used the analyzed documents to compile the list of bodies responsible for SI. Using the websites of these bodies, we identified the people responsible for SI in their policy sector - initial respondents. We contacted them by phone with our request for an interview. In this way, we identified 9 initial respondents. Respondents from the initial round who agreed to the interview identified new experts we could talk to, and we repeated this procedure until we stopped obtaining new nominations (saturation principle). We thus identified 17 potential respondents, 11 of whom agreed to the interview (response rate 64.7%). The rounds of snowball sampling are presented in Table 11.

Table 11.Snowball rounds

Round	New nominations	Responded	Not responded
Initial	9	4	5
1st	6	5	1
2nd	2	2	-

Total	**17**	**11**	**6**

Source: Own elaboration

We used a semi-structured interview with a protocol containing 10 questions that served as a guide for conversation. Questions were related to the understanding of what SI is, the content of current regulations, implementation of regulations, enabling and constraining factors for SI, the role of the organization in the policy field and the future of SI. We asked additional questions only to stimulate or direct conversation or when we needed clarification. At the end of the interview, we summarized the main ideas from the conversation to ensure that we had a proper understanding of the message the expert wanted to convey. Each expert signed a confidentiality agreement containing a concise description and the purpose of the research, the use of the data and ethical provisions. Interviews lasted from 45 min to 1.5h. We recorded the interviews and analyzed them directly in NVivo. We then compared the results of the interviews with our content analysis and previous studies on SI and on SE in Slovenia.

4.4.4 How are EU policies on SI reflected in Slovenian policy documents relevant to forestry?

This section presents the results of the content analysis answering our first research question. As we were interested in SI initiatives in the forestry-based sector, we identified 18 potentially relevant policy documents at a national level (Table 12).

For the detailed results of each policy sector, please refer to Annex E1. *Cohesion policy documents* and Annex E5. Environmental policy documents.

Table 12.Policy documents identified at a national level (Slovenia)

Policy sector	Document Name	Type of document	Year	Main body responsible
COHESION POLICY	Slovenia's Development Strategy 2030 (SDS)	Strategy	2017	The Government Office for Development and European Cohesion Policy
	Operational Programme for the Implementation of the EU Cohesion Policy 2014-2020 (OP)	Operational Programme	2014	
	Slovenia's Smart Specialization Strategy (S4)	Strategy	2015	

Policy sector	Document Name	Type of document	Year	Main body responsible
SOCIAL ENTREPRENEURSHIP	Law on Social Entrepreneurship (LSE)	Law	2011	Ministry of Economic Development and Technology
	Strategy for the Development of Social Entrepreneurship for the period 2013 – 2016 (SDSE)	Strategy	2013	
	Program of Measures 2014-2015 for the Implementation of the Strategy for the Development of Social Enterprise for the Period 2013-2016 (PMSE)	Action Plan	2013	Ministry of Labor, Family, Social Affairs, and Equal Opportunities
	Rules on the Monitoring of the Operation of Social Enterprises (MOSE)	Bylaw	2013	
	Amendments to the SRS 2006 and the SRS 40 (2012) - Accounting solutions in social enterprises (2012) (SRS40)	Accounting standard	2012	Slovenian Institute of Auditors
RURAL DEVELOPMENT	Rural Development Programme of the Republic of Slovenia 2014–2020 (RDP)	Programme	2015	
	Decree on the measure for capital investments and on the sub-measure for the support for investments in forestry technologies, processing, mobilization and marketing of forestry products pursuant to the Rural Development Programme of the Republic of Slovenia 2014–2020 (DCI)	Decree	2015	Ministry of Agriculture, Forestry and Food, Agriculture Directorate

Policy sector	Document Name	Type of document	Year	Main body responsible
	Decree on the implementation of community-led local development in the programming period 2014-2020 (DCLLD)	Decree	2015	Ministry of Agriculture, Forestry and Food
FORESTRY	Resolution on National Forest Programme (RNFP)	Strategy	2007	Ministry of Agriculture, Forestry and Food
	Operational program for the Implementation of the National Forest Programme 2017-2021 (OPNFP)	Operational Programme	2017	
	Action Plan for Increasing Competitiveness of Forest Wood Chains in Slovenia to 2020 "Wood is Beautiful" (AP)	Action Plan	2012	
	Forest Act (FA)	Law	1993	
	Management of State Forests Act (MSFA)	Law	2016	
ENVIRONMENT	Framework Program for the Transition to the Green Economy with the Action Plan for the implementation and Plan of activities of ministries and government services 2015-2016 (FPGE)	Programme/ Action plan	2015	Ministry of the Environment and Spatial Planning
	Strategic Framework for Climate Change Adaptation (SFCCA)	Strategy	2016	

Source: Own elaboration

The documents pertaining to cohesion, social entrepreneurship, rural development, and environmental policy explicitly address SI exclusively by statements in the introductory parts, but later refer exclusively to SE. The documents on forest policy address SI implicitly. An

overview of how documents address SI according to our coding categories is presented in Table 13.

Table 13. Social innovation addressed by the documents according to our coding categories

Document	Coding categories														
	Explicit SI					Explicit SE					Implicit SI				
	S	FI	II	NI	RI	S	FI	II	NI	RI	S	FI	II	NI	RI
SDS	X										X				
OP	X						X	X	X	X					
S4	X					X	X	X	X						
LSE						X	X	X	X	X					
SDSE						X									
PMSE							X	X	X	X					
MOSE							X			X					
SRS40							X			X					
RDP							X					X	X		
DCI										X					
DCLLD											X	X			X
NFP											X				
OPNFP												X	X	X	
AP															
FA											X			X	X
MSFA															
FPGE						X									
SFCCA											X				

Source: Own elaboration

Cohesion policy documents explicitly address SI by statements on the significance of SI for social integration, poverty reduction and economic development, without indication of policy instruments. While the term SI is present in parts related to the objectives and potentials, in the operational parts of those documents the term SE appears instead of SI. Cohesion policy documents present SE as part of the solution to many contemporary problems, such as job creation, social inclusion, poverty reduction and green economic growth (Annex E1. Cohesion policy documents), specifying policy instruments, elaborated in detail within the regulatory framework on SE.

While the regulatory framework on SE does not explicitly or implicitly address SI, it explicitly addresses SE with statements, as well as with regulatory, financial, informational and networking instruments. The regulatory framework (Annex E2. Social entrepreneurship policy documents) features several barriers for SE with respect to each prescribed policy instrument (see also Gartner et al., 2015; Hren, 2015; Podmenik et al., 2017). That is how the Law on Social Enterprises (Official Gazette of RS No.20/2011, 2011) identifies SE as organizations

that are expected to show a number of key features (regulatory policy instruments) and puts an emphasis on social inclusion (work integration), thus combining a narrow and organizational definition of SE (Giancarlo, 2017). According to nine experts (E1-E6, E8, E9, E11), the regulatory framework for SE is constraining, as organizations wanting to register as SE need to fulfill several strict preconditions, such as operating in a strictly defined field of activities, employment conditions regarding the category and number of people to be employed, prescribed legal forms, etc. The Law on Social Enterprises recognizes two types of SE:

1) Type A: The SE is established for permanently conducting social entrepreneurship activities and permanently employs at least one worker in the first year and at least two in subsequent years
2) Type B: The SE is established for the employment of vulnerable groups (defined in §6), so conducts its activities by permanently employing at least one-third of workers from vulnerable groups.

According to nine experts (E1-E6, E8, E9, E11), there are issues with respect to legal entities that can register as SE. One expert (E8) reported a case related to an agricultural holding legally registered as an employment institute (Slo. *Zaposlitveni zavod*) for persons with disabilities. Although this institute operates under the principles of SE Type B, interpretation of §9 of the Law on Social Enterprises (for elaboration see Annex B2 Aggregated themes into analytical constructs) by the Slovenian Court of Justice was that the institute is not eligible to register as a SE. Six experts reported that the limitation of core activities of SE is a barrier to the development of the sector (E1-E5, E9, E10). One expert (E6) had an opposite opinion, claiming that SE must be regulated with respect to activities, as they must be both environmentally and socially responsible.

Some financial, informational and networking policy instruments for promoting and supporting SE also seem to be inadequate (see also Gartner et al., 2015; Hren, 2015; Konda et al., 2015; Podmenik et al., 2017; Slapnik et.al, 2016). Although four experts (E1, E5, E6, E9) recognized that the government ensured that sufficient information exists on SE and can easily be obtained through support service organizations, ranging from ministries, governmental agencies at national, regional and local level, to NGOs and incubators (see also Gartner et al., 2015), they also said that the information on SE was in this way fragmented. The major remarks of experts were on financial support and the way it was distributed. Eight (E1-E6, E8, E9) mentioned that the financial means for SE were significant and sufficient as SE start-up projects were able to

get subventions totaling Euros 300,000 (Euros 20,000 per project). Despite this, those same experts pointed to the lack of adequate financing schemes, such as microcredits and guarantees. As previous studies on SE in Slovenia (Gartner et al., 2015; Hren, 2015; Konda et al., 2015; Podmenik et al., 2017) recognized inadequate financing schemes as a barrier to the development of SE, the government undertook steps to improve the situation. That is why in 2016, the Slovenian Enterprise Fund together with the Ministry of Economic Development and Technology announced a public tender for microcredits for SE (Official Gazette of RS No. 19/16) to an amount of Euros 4 million. Microcredits were intended to stimulate entrepreneurial activity aimed at the social activation of vulnerable groups. The amount of microcredit was Euros 1,000-25,000 at a fixed interest rate of 2-5%, which one expert (E8) described as not at all favorable. In addition, SE registered for agricultural or forestry activities were not eligible for microcredits (Official Gazette of RS No. 19/16, 2016, p. 545). Six experts (E2-E6, E8, E9) said that they expected problems related to the SE policy because of top-down policy development and support (see also Hren, 2015). The current Government Strategic Project P9 (2015-2019) intends to remove the barriers of SE regulatory framework (Slapnik, 2016), such as division of SE into type A and B, limitations to the SE fields of activities, permanent employment of a certain number of employees, and division of profits and maximum wage that SE can pay to its employees (E1). The envisaged results are a new law on SE, and a strategy on the social economy that should replace the current strategy on SE (Slapnik et al., 2016), but those documents were still under preparation at the time of the research.

The Rural Development Programme (Annex E3. Rural development policy documents) is one of the most important instruments for supporting agricultural holdings and private forest owners in their activities (E2, E3, E4, E6, E7, E8, E10, E11). The Rural Development Programme explicitly addresses SE, through statements and by specifying financial instruments within measures M4.1 and M6.4 (Ministry of Agriculture Forestry and Food, 2017b). Although those two measures explicitly support SE, the call for the M6.4 was not open until 2018 (E2, E10). M6.4 introduces financial guarantees as financial instruments, which the Monitoring Committee for RDP discussed in February 2018 (Ministry of Agriculture Forestry and Food, 2018). This will be a new financing mechanism that should transfer part of the risk of non-repayment of the loan from the beneficiary to the financial institution itself and will thus entail a lower cost of obtaining a loan to the final recipient. Guarantees should be introduced after confirmation of the revision of the Rural Development Programme amendments by the European Commission, and the adoption of an implementing regulation of

financial instruments by the Government of the Republic of Slovenia. Implementation of the guarantees cannot, therefore, be expected before 2019 (Ministry of Agriculture Forestry and Food, 2018). Measures of the Rural Development Programme related to forestry do not exclude SE as beneficiaries, but currently, SE does not have any advantages (i.e. additional points) when applying. The Rural Development Programme, however, implicitly addresses SI with financial and informational instruments, through measures where associations and cooperatives are eligible to apply as beneficiaries, the most obvious one being M19.1 Community-Led Local Development (Ministry of Agriculture Forestry and Food, 2017b; Official Gazette of RS No.42/15, 2015).

Forest policy documents do not explicitly address SI or SE (Annex E4. Forest policy documents). When asked about SI in forestry, four experts (E4, E7, E10, E11) talked about SE making a clear distinction between 'primary' forest management activities (timber production and mobilization), and other ('secondary') forestry-based activities (collection of non-wood forest products, tourism, etc.), as they perceive the former as less suitable for SE. "If we are talking about forestry as primary activities, only sanitary works are suitable for SE, as we are talking about people who are not forestry professionals. Professional forestry work is dangerous, it demands equipment and qualifications and it is very hard to draw a line between social and regular entrepreneurship. If somebody is capable of working with a chainsaw and tractor, then it is a regular enterprise, even if you call it social and employ people who were not employed before. But, if we are talking about other activities that are not primary, such as products and services related to traditional knowledge, tourism, etc., those are more suitable for SE, but it is no longer just forestry" (E4). Similarly to the Rural Development Programme, forest policy documents implicitly address SI, through provisions related to private forest owners, their associations and cooperatives.

Environmental policy documents only marginally address SI (Annex E5. Environmental policy documents), by implicit statements on cooperation, or explicitly by calling upon the Operational Programme for the Implementation of the EU Cohesion Policy (Governmental Office for Development and European Cohesion Policy, 2015a) that again explicitly addresses only SE, and not SI more broadly.

4.4.5 What are the implications of Slovenian policy framework conditions for the development of forestry-based SI initiatives?

In this section, we discuss the implications of each analyzed policy field on forestry-based SI initiatives. We do so by reflecting on the two possible ways for their development.

While cohesion policy documents introduced the term SI, in their operational parts the term SI changes into the term SE. Similarly, other analyzed policies explicitly address exclusively SE. This understanding of SI reflects a predominantly economic interpretation related to SE, thus highlighting the entrepreneurial more than the social aspects of SI. Indeed, seven experts (E1, E5, E7, E8, E9, E10, E11) understand SI in terms of SE. "Well, SI is not a defined term in Slovenian legal order. I would maybe divide it into two words, and start from innovation, which, to me, is something new, innovative, which is recognized *on the market*, meaning that somebody is willing to pay something for it, so it has some economic value, which can be monetary or not. Social means that it provides a wider benefit for society" (E1, emphasis added). Analyzed policy documents reflect the same market understanding of SI, as the term SI does not appear at all, but the focus is on SE. Additionally, eight experts (E1-E6, E8, E9) stated that in general, perceptions of SE are negative. SE has a negative connotation, as the term 'social' relates to social aid, subsidies, and socialism, so SE is not connected with innovation, creativity, and entrepreneurial spirit (see also Gartner et al., 2015; Hren, 2015; Wilkinson, 2014).

The regulatory framework on SE is strict and narrow, as it constrains registration and operating of SE to a significant extent (see also Gartner et al., 2015; Podmenik et al., 2017; SloHraSocionet, 2015; Hren, 2015; Wilkinson, 2014), including SI initiatives registering and operating as an SE. Indeed, almost all experts (except E7 and E10) stressed that conditions for registration of SE are mostly unreasonable and limiting and that even legal entities that fulfill requirements of the SE regulatory framework often choose not to register as SE, although they are socially innovative.

Experts highlighted the high potential of the Rural Development Programme for the development of SI in forestry and agriculture, again mostly through SE. The measures M6.4 (*Diversification into non-agricultural activities*), M9 (*Setting up of producer groups and organizations*) and M19.1 (*Community-Led Local Development*) could offer the best possibilities for agricultural holdings and private forest owners to engage in forestry-related SI initiatives, but two of them were not implemented at the time of this research.

The main barrier to supporting market-oriented SI initiatives through the Rural Development Programme is that farmers and most agricultural holdings are not eligible to register as SE (the only legally recognized form of SI), as they are usually not registered as non-profit legal entities. Three experts (E2-E4) highlighted that there were proposals for a change to the Law on Social Entrepreneurship that would allow agricultural holdings to register as SE, but these proposals were not accepted. The same experts stressed that interest by agricultural holdings in registering as SE is still very low, mostly because they would have to transfer financing rights from agricultural holding to SE, and the other strict conditions prescribed by the regulatory framework on SE. Nevertheless, a certain number of agricultural holdings are registered as SE. Also, all cooperatives already operate under the non- profit principle and the regulatory framework does not treat them as SE. "The problem is that our policy-makers concentrated on those two types of SE (Type A and Type B: clarification added), which we were against, and this does not really target the purpose of SE or, a better term to use, socially responsible enterprises, which have a wider social impact. In this way, it is really hard to operate as a SE in agriculture or forestry. Yet, we have many agricultural holdings and companies that are socially innovative, it is just that they are not called SE" (E3).

Experts (E4, E7, E9, E10, E11) see the potential of SI in forestry with respect to increasing cooperation among private forest owners, strengthening the value chain from resource to the final product, encouraging new commercial activities related to non-wood forest products and services related to tourism, recreation, tradition and culture. At the same time, they stressed the importance of monitoring all those activities to ensure that the forest resources are not overused. Two experts (E7, E10) did not find that forestry-related regulation creates barriers to the development of SI. They pointed out that the regulatory framework for forestry does support the establishment of legal entities that are eligible for registration as SE, such as associations, machinery rings, and study circles. All these organizations already exist and operate in Slovenia, and five experts (E4, E7, E9, E10, E11) pointed out that they are all SI. Beyond that, one expert stressed that forestry is all about SI, as it is based on the principle of sustainability and provides benefits for the whole of society and future generations (E7).

While associations, cooperatives, and agricultural commons might in some cases be non-market, forestry-based SI initiatives, the current social entrepreneurship policy framework is not favorable to their development. The forest policy framework supports cooperation among private forest owners by regulatory, informational, financial and networking instruments, but the problem of inactive private forest owners and their associations persists in Slovenia

(Pezdevšek Malovrh and Laktić, 2017). Approximately 50% of private forest owners do not manage their forests and are not willing to join an association (Pezdevšek Malovrh et al., 2017, 2015). On that problem, one expert (E4) pointed out that the organization of the forestry sector is inadequate to proactively engage with private forest owners because their advisory service is mostly directed at timber harvesting, sanitary cutting, and training on work safety with chainsaws. According to that expert, the lack of motivation and advice to private forest owners on other income possibilities (i.e. non-wood forest products, recreation, tourism, etc.) is one of the main causes of their inactivity.

Although policy framework conditions prioritize market-oriented SI initiatives, examples of non-market, forestry-based SI initiatives do exist in Slovenia. For example, the cases of Study circles and the Charcoal Land initiative are both SI and have been operating in Slovenia for decades. The former engages inhabitants of rural areas, public and non-governmental actors in deliberative, life-long learning aimed at preserving traditional knowledge while obtaining new skills (Bogataj and Del Gobbo, 2015). The latter is cooperation among private forest owners with public actors aiming to stimulate local development and prevent youth migration through the practice of charcoal burning (Miklič, 2010; MIZKS, 2012). Although those two examples are SI initiatives, it is probable that under the current regulatory framework they will not be institutionalized as such. Yet, both are finding their way through regulations and the search for funding to continue operating.

4.4.6 Conclusions

With this study, we found that the prevalent economic understanding of SI reflects in Slovenian policy documents by equating SI with SE. In this sense, the view of SI as both "growth engine" (Fougère et al., 2017, p. 826) and as a way to solve societal problems translates into explicit statements on SI in cohesion policy documents and progresses by the operationalization of SI through instruments solely for SE. That is why policy documents of cohesion policy address SE as a contributor to employment, social inclusion, sustainability, green and circular economy, and cohesion.

Further on, this understanding of SI in the form of SE becomes even more explicit in the regulatory framework on SE, especially through the division into two specific types, namely SE as enterprises for the delivery of products and services of general market interest, and SE as enterprises for the employment of vulnerable groups. Within the regulatory framework, SE is defined strictly with respect to legal forms, activities, profit sharing, and internal governance,

imposing barriers to the registration and development of SE. Although the Slovenian government is currently working on creating a less restrictive regulatory framework on SE to remove barriers, the fact that the strategy on SE will become part of the strategy on the social economy indicates a strengthening of the economic understanding of SI as a means to reduce state expenditure by creating a market arena for organizations guided by social objectives. Similar to cohesion policy, the Rural Development Programme embraces the market-oriented SI and focuses on SE. Two Rural Development Programme measures entitle SE as beneficiaries, but other measures do not explicitly address SI or SE. Forest policy documents do not explicitly mention SI or SE. This is reasonable for documents that were adopted before 2011 when SI or SE became part of the policy discourse in Slovenia. But newly adopted forest policy documents also do not integrate SI or SE. Contrary to forest policy documents, environmental policy documents again explicitly address SE with one statement and refer to cohesion policy for implementation.

As SI is about a reconfiguring of social practices through the creation of new products or services, new relationships, new institutions, and/or new organizational forms, it is much broader then SE. SE is just one of the possible organizational forms SI can take. As policy documents equate SI with SE and mostly target economic growth and social inclusion, the framework conditions do not comprehensively support SI initiatives. The only formal way for an SI initiative to obtain support is to register as a SE, but even then the regulatory framework for SE is rather restrictive and demanding, so many SI initiatives choose not to do so. Policy instruments exist that implicitly address SI initiatives, and these target networking, information exchange and financing (i.e. associations, subventions, information hubs). This becomes especially evident in the Rural Development Programme measure on Community-Led Local Development (Bosworth et al., 2016). Regulatory framework on forestry implicitly addresses forestry-based SI initiatives, through measures that support cooperation among private forest owners, and the creation of associations.

We conclude that existing policy framework conditions do not comprehensively address SI initiatives. The framework supports the establishment of SE, so non-market, forestry-based SI initiatives cannot be institutionalized as such. Because of this, forestry-based SI initiatives have two possible ways to develop. The first applies to market-oriented, forestry-based SI initiatives that offer new products or services. Such initiatives can register as SE and mobilize resources they can unlock within the SE regulatory framework and within the Rural Development Programme measures explicitly addressing SE. The second way addresses forestry-based SI

initiatives that are not market-oriented. Those initiatives will have to navigate through policy framework conditions, using their own capacities to apply for resources available through the Rural Development Programme and forest policy instruments that target cooperation and networking, such as support for the establishment of producers' organizations, cooperation through associations and future "Forest Dialogue".

4.4.7 Acknowledgments

This study presents the first empirical step of the Ph.D. project titled Governance capacities of public actors for supporting social innovation initiatives in the forest-based sector conducted under the scholarship of the University of Padova. The study was enabled by the grant for European Forest Institute (EFI) Short Scientific Visits 2016–2017 titled Forest Policies for Supporting Social Innovation: Aligning Diverging Interest and Creating Synergies in Forest Use Practice. We are grateful to European Forest Institute, EFI Central-East European Regional Office (EFICEEC) and University of Natural Resources and Life Sciences, Vienna - Institute of Forest, Environmental and Natural Resource Policy for their support. We owe our gratitude to all experts who dedicated their time to making this research possible. Finally, we acknowledge the efforts of the Horizon 2020 project Social Innovation in Marginalized Rural Areas (SIMRA) Grant Agreement No. 677622, which provided useful insights for the search on SI relevant policies.

V. GENERAL DISCUSSION

This research had the ambitious aim to explore the governance capacity of public actors for forest-based SI. Exploration of the governance capacity of public actors for forest-based SI was operationalized through 3 specific objectives (SO_{1-3}), which are discussed in sub-section 5.1. It starts from a brief discussion of SO_1 that was fulfilled in Study 1 by the identification of constructs of governance capacity and SI. It is followed by the reflection on SO_2 that highlights the crucial constructs of an analytical framework (developed also within Study 1). The discussion on SO_3 brings together findings from empirical studies (Study 2,3 and 4) debating them in the light of crucial constructs of the proposed analytical framework. Finally, sub-section 5.2 reflects on the methodology and limitations of the research.

5.1. Exploring the governance capacity of public actors for forest-based social innovation

The first specific objective (SO_1) was to identify key constructs of the governance capacity of public actors for social innovation. This objective was guided by the research question (RQ_1) *What are the key constructs of the governance capacity of public actors for social innovation?* The SO1 and RQ1 were fulfilled within Study1 in which I identified 22 governance sub-capacities and 17 themes that were used to operationalize governance capacity and social innovation (for a detailed discussion of identified themes and sub-capacities, please refer to sub-sections 2.4 and 8.1). Based on the analysis, Study 1 found that both concepts (the one of governance capacity and the other of social innovation) proved to be elusive. Governance itself has at least three different meanings (Fukuyama, 2016), and the conceptualization of governance capacity is dependent on the standing point of the authors. Similarly, SI can be understood in several different ways, also leading to different conceptualizations (Edwards-Schachter and Wallace, 2017a; Marques et al., 2018). Thus, there was no one common theory, concept or framework that could straightforward guide the exploration of governance capacity of public actors for forest-based SI. This finding led to SO_2.

The second specific objective (SO_2) was t*o develop a framework for analyzing, governance capacity of public actors for forest-based social innovation.* SO_2 was guided by the RQ2: *What identified constructs and governance sub-capacities of public actors are crucial for forest-based social innovation*? In Study 1 I identified crucial constructs for analyzing the governance capacity of public actors for SI sub-capacities. Those constructs were the actors (individual, organization, and SI initiative), their roles, and context (temporal, spatial, and social). As for the crucial governance sub-capacities, I proposed a distinction between task-related (analytical,

coordination, delivery and regulatory) and personality-related (adaptive, deliberative, learning and resource) capacity. Crucial constructs and governance sub-capacities composed an analytical framework (*Figure 15*). The bridging concept used in the analytical framework was one of the roles, as it was suitable for recognizing capacities based on the types of role and use of role (Callero, 1994).

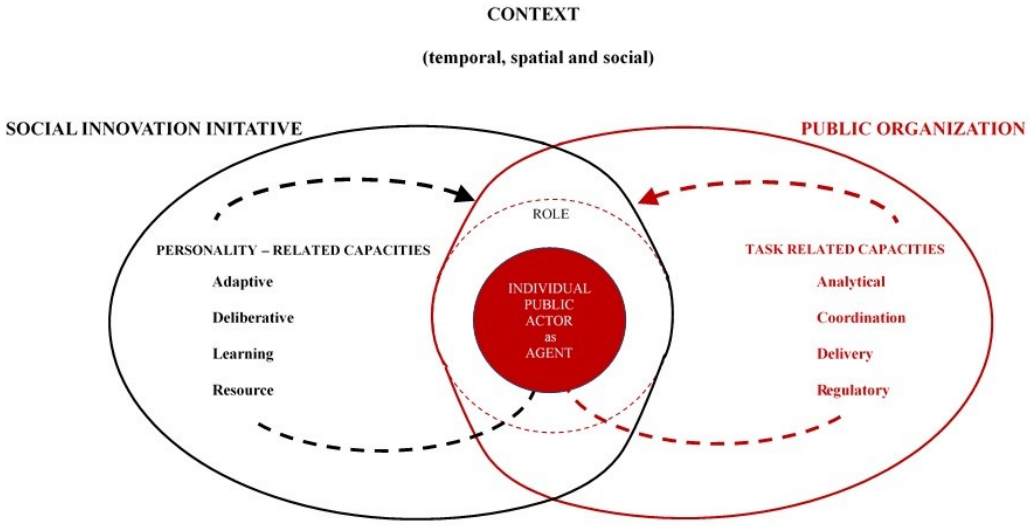

Figure 15. Proposed framework for analyzing governance capacity of public actors for social innovation (Source: Own elaboration, reproduced from Sub-section 2.5)

The third specific objective (SO_3) was *to test and refine the proposed framework for analyzing the governance capacity of public actors for forest-based social innovation, by empirically applying it in a case study.* This objective was guided by two research questions – $RQ_{3.1}$ and $RQ_{3.2}$.

$RQ_{3.1}$ was *How does public actors' role influence forest-based social innovation initiatives?* This question was answered within Study 2: Roles of public actors in social innovation initiatives in marginalized rural areas that investigated public actors' roles and their influence on SI initiatives. For this purpose, I used the survey whose response rate was unfortunately too low (12.4%) for hypothesis testing and deducting unbiased, generalizable conclusions. Regardless of that, preliminary results confirmed that public actors were engaged in both, preparatory and project phases of the SI initiatives development, indicating that they do act as internal agents of SI. The results also revealed that public actors influence the development of SI initiatives through multiple roles, which is also aligned with the findings of Butzin and Terstriep (2018) derived from the analysis of 1000 SI initiatives.

The scientific literature until now conceptualized the role of public actors in SI based on their involvement in SI (see Butzin and Terstriep, 2018; Fischer and Newig, 2016). I proposed a more nuanced distinction of 13 different roles. This more detailed distinction might be useful for two reasons. First, the roles of public actors I proposed, correspond to the tasks and activities of public actors. They can be regarded as organizational roles. Based on the organizational roles one can identify task-related governance sub-capacities. For example, if public actors had organizing or administrating role, they would have to align activities of their respective organizations with other involved actors or among units of their respective organization. Aligning different activities within one organization or amongst several actors indicate coordination capacity (Lodge and Wegrich, 2014, p. 41). Of course, it is an oversimplification to say that if the actor had some organizing role it had corresponding organizational governance sub-capacity, but it can serve as the starting point for exploring the abilities of public actors.

Second, 13 proposed organizational roles of public actors correspond to a large extent to actors' roles in SI. To elaborate on this claim, I first have to make a small digression to reflect on the roles of public actors in SI (SI roles). Two similar categorizations of SI roles were recently proposed by several authors[16]. Secco et al. (2017b, p.51) distinguished among "innovators have an idea that may be visionary but not necessarily applicable in practice given prevailing conditions; b) followers decide to believe and take up the idea, and make it acceptable, feasible, and often amplify and implement it in its initial stages; c) transformers adopt the idea early on and contribute to network change and growth; and d) implementers realize and consolidate the idea". Even more recent, but similar is the categorization of (Butzin and Terstriep, 2018, pp. 78–79) who make a difference among developers who "translate knowledge about unsatisfactory circumstances into an innovative idea in order to improve the situation", 'promoters' that provide "infrastructural equipment, funding, and connect initiatives to superior policy programs", 'supporters' facilitate the diffusion of social innovations through, dissemination or lobbying activities, and 'knowledge providers' that "provide special knowledge relevant to spur and enrich the development process".

[16] It might seem more logical to present the two categorizations of roles in the introduction section of this dissertation. These two categorizations were presented this late, as at the time of conceptualization of this research they were not available. The categorization of Secco (2016) is not specific for public actors and was developed in parallel with this dissertation, as part of SIMRA project. The categorization og Butzin and Terstriep, was published in 2018, when this research was near its end. Therefor, I wanted to follow my initial logic, and used this literature only for discussion.

What seems interesting is that the existing definition of SI roles by do not explicitly accommodate certain organizational roles of public actors. For example, the literature on SI widely suggests that public actors create policy conditions for the development of SI (Howaldt et al., 2018; Nicholls et al., 2015; Rao-Nicholson et al., 2017), but it seems that regulatory or administrating role of public actors are not recognized by existing role typologies.

The roles of public actors and their influence on SI initiatives were then further explored within Study 3: Role of public actors in the forest-based social innovation - The case of the Charcoal Land initiative in Slovenia. Case study results also pointed to multiple organizational and SI roles of public actors engaged in the SI initiative. While Study 3 discussed several roles of crucial actors (please, see sub-section 4.3.4.2) research also revealed that organizational public actors who were engaged in the Charcoal Land initiative (i.e. SFS, Municipality) did have a role in regulation and administration of the initiative activities. SFS and Municipality helped the initiative in obtaining necessary permits, project applications, etc. At the same time, those actors had the SI role of followers, supporters and knowledge providers (please, see sub-section 4.3.4.2.). While public actors that were engaged in the Charcoal land had a positive administrative role, the regulatory role of Ministry might be interpreted as negative, as from 2015 charcoal burners are demanded to register traditional charcoal burning as supplementary activity on the farm (please see sub-section The development of the Charcoal Land initiative)

While SI roles tell about the engagement of public actor in SI, organizational role reflects the role of public actors in terms of prescribed responsibilities and duties within the organization. Organizations are ”bound to the particular system of rules.” (Stevanov and Krott, 2013, p. 369). In this sense, public organizations might act as barriers or constraints to individual public actors, as the behavior of individual public actors has to be aligned with organizational rules and other laws in place (Lynch, 2007). This was evident from the case study results, where the SFS director had to act in line with the organizational goals.

$RQ_{3.2}$ was *What are the governance sub-capacities of public actors involved in the forest-based social innovation initiative?* This question was answered with Study 3: Role of public actors in the forest-based social innovation - The case of the Charcoal Land initiative in Slovenia by analyzing governance capacities based on the roles of public actors engaged in the Charcoal Land initiative. For this purpose, the analytical framework indicated the crucial constructs for analysis, such as organizational public actors, organizational roles and task-related capacities, individual public actors and personality-related capacities.

Besides organizational public actors, the framework proposed taking into consideration the acting of an individual public actor as an agent of SI. Individual public actors engaged in SI act as a bridge between their respective organizations and the SI initiative. They act as proxy agents of their respective organizations (Bandura, 2001; Hewson, 2010), enacting their organizational roles in performing the tasks of public organizations. The example of how SFS managed to fund the Charcoal land initiative through in-kind financing nicely illustrates that individual public actors can act outside of the bounds of duty and responsibility, although not against what is expected and required from them. This acting outside of the bounds of duty and responsibility can be prescribed to direct personal agency that each individual possesses (Bandura, 2001). Through exercising direct personal agency individual public actors can find a creative way to engage in and support social innovation. For this, public actors need "a radically different set of skills and capacities compared to those required for their traditional role as bureaucratic leaders" (Sørensen and Torfing, 2014, p. 240).

The framework proposed that these 'radically different capacities' are personality-related sub-capacities, such as resource, learning, adaptative and deliberative capacities. A combination of those capacities is necessary for navigating the barriers of public bureaucracies, finding innovative ways to access and utilize resource, and facilitation of learning that is crucial for collaboration of public and other actors, and success of SI initiatives (Sørensen and Torfing, 2014, pp. 249–254). Personality-related governance capacities were indeed crucial for the success of the initiative. It is through learning and deliberation that public actors (among other agents) spread the knowledge about the usefulness of the charcoal burning practice and obtained the support of actors who had the power and resources to support the initiatives' development. Public actors also used their adaptive capacity to navigate existing regulations and access the resources for supporting the Charcoal land initiative.

From the public policy perspective, to enact their organizational roles public actors need task-related capacities, such as analytical, coordination, delivery and regulatory ability (Lodge and Wegrich, 2014). While those capacities are necessary for performing public tasks, they are confronted with barriers that are "rooted in bureaucratic institutional factors, such as formal rules and routines, ridged budget and accounting systems, top-down steering based on command and control, and horizontal specialization that leads to the formation of mental and organizational silos" (Sørensen and Torfing, 2014, p. 239). Indeed, the research pointed out that the budgetary constraints of SFS influenced its resource capacity, as SFS was not able to finance the initiative directly. But the SFS director compensated this with his adaptive capacity

by founding the other ways to provide financial resources to the initiative (such as through in-kind financing).

Finally, this research explored the confirmed that contextual factors influence the development of SI initiatives (Polman et al., 2017; Secco et al., 2017b; Vickers and Lyon, 2014). In the case of the Charcoal Land initiative, the revival of charcoal burning practice was possible due to sufficient material (i.e. wood), and cultural resources (i.e. traditional knowledge). Policy context though did not favor the development of the Charcoal Land initiative, as there was no direct way for non-market oriented SI initiatives to obtain policy and financial support (see Study 4: Implications of policy framework conditions for the development of forest-based social innovation in Slovenia. Regardless of relatively unfavorable conditions, this initiative did find a way to develop throughout the years and to spread the practice all over Slovenia.

The Charcoal Land is an interesting case of SI initiative that was from the very beginning strongly supported by public actors. As SI initiatives are most often driven by civil society, it is easy to imagine that not many initiatives have this kind of support. Those initiatives have to find ways to compensate for the knowledge and resources that public actors can access and provide.

5.2. Limitations of the research

As there was no existing framework for analyzing governance capacity for SI, the research started from drafting the framework based on the literature review and analysis. As the literature selection and review was done in 2016 and 2017, many of the valuable studies on governance capacity (e.g. Wu et al., 2018) and SI (e.g. Butzin and Terstriep, 2018) were not available at the moment. Thus, this research was done in parallel with the abovementioned studies and produced similar results.

The literature review method was systematized, thus securing high replicability of the method. Based on the specified procedures and criteria, another researcher could easily replicate the literature search and selection of the studies. The synthesis of analyzed studies was configurative, involving a high level of interpretation. This means that the researchers with a different background might, and probably would interpret the data differently arriving at the different constructs or elements of an analytical framework.

The limitation of the framework is that it focuses on the public actors, putting all other actors and their interrelations into “the brackets”. As governance is a matter of collaborative efforts of a plethora of actors, it needs to be underlined that this “bracketing” could lead to a narrow

understanding of governance capacity and improper application of the framework. Thus, the focus on the public actors needs to serve an analytical purpose and to direct the user's attention, while all relevant actors and their inter-relation should be taken into account.

One of the major limitations of the research is the low response rate of the survey, which resulted in an inability to statistically test the hypothesis on which the framework is built. Testing the hypothesis based on the response rate of 12.4% would produce statistically insignificant results. Thus, survey results should be taken as a preliminary description, and not as unbiased generalizable claims. The survey method and design could still be used in future research, or for supporting possible future qualitative analysis of initiatives that responded. The number of responses from Serbia is very high, so that data might be used in conjunction with Ivana Zivojinovic (BOKU)[17] qualitative interviews from Serbia. Surveys' (from Serbian cases) and interviews' data can be analyzed together at the beginning of 2020.

The survey's low response rate was to some extent compensated by rich data of the case study. The case study provided valuable results on the role and importance of public actors in a social innovation initiative. Case study results are aligned with existing literature on SI (e.g. Avelino et al., 2019; Butzin and Terstriep, 2018; Rogelja et al., 2018b; Wittmayer et al., 2017)

As the research on governance capacity for forest-based SI is a novel topic, a single case exploratory study was valuable for making 'the first steps' in knowledge generation. To increase the validity of the case study several methods for data collection and analysis were used, and obtained results were compared with findings from the scientific literature. Although this increases the validity of the research results, one should be careful when giving broad general conclusions. The reason is that the research deployed an in-depth single case study. While the single case study gives a detailed picture of the phenomena addressed, one should not generalize based on its results. In the future, comparative case studies that would test and improve the framework would be a valuable asset to the research on governance capacity for SI.

The case study served its purpose for applying and improving an analytical framework proposed based on the literature review. As the topic of governance capacity for SI complex, each of the constructs and sub-capacities of the proposed framework can be a research for itself. Further research might focus on one of the constructs (i.e. role of organizational actors,

[17] Ivana Zivojinovic is a Ph.D. colleague that works on the topic of actors and institutions in SI. She has in-depth interviews with representatives of several SI initiatives from Serbia.

capacities of organizational actors, context), or on a combination of few. Given the multi-disciplinary nature of SI and governance capacity, a team composed of researchers with different backgrounds would be useful in dealing with this topic. Furthermore, future similar case studies are needed to make generalizations possible.

The major constraint I dealt with during this research is the duration which is strictly limited to 3 years from the beginning to the end of the Ph.D. program. The negative side of the time constraint is the trade-offs that I had to make. The major trade-off was that in some instances I was not able to go in-depth as I wished to. For example, each of task-related or personality-related sub-capacities could be further elaborated on its constituents and analyzed in detail. It would be interesting and useful to 'brake' each capacity on its constitutive laments and analyze it in light of broader theories, such as leadership theory, or public administration theory. A few more Ph.D. studies would be needed for this kind of analysis. That is why I consider this research to be more of a beginning than the end of my research journey on governance capacities for SI.

VI. CONCLUSIONS

This research had an ambitious aim in exploring the governance capacity of public actors for forest-based SI. It was ambitious as both constructs (the one of governance capacity, and the other of SI) are elusive and open to interpretation.

The first step of exploring governance capacity for forest-based SI was to develop a framework that could guide empirical research. Such a framework was developed based on the separate review and analysis of the literature on governance capacity and SI, whose results were brought together in the draft framework.

The framework was composed of few constructs – actors (individual, organizational, and SI initiative), role, capacities (task-, and personality-related) and context. Task-related governance capacities correspond to those that public policy literature calls 'problem-solving' or 'administrative' capacities. They refer to analytical, coordination, delivery and regulatory capacity – the capacities that public actors need to perform the tasks mandated by the state. Personality-related capacities correspond to those that literature calls "collaborative", or "innovative". They refer to deliberative, learning, adaptive, and resource capacity – the capacities that are needed for understanding the others, formulating common goals, and reacting for changing conditions.

The central construct of the framework was the role. This research distinguished between organizational roles of public actors (i.e. administrative, resourcing, advising), and SI role (i.e. innovator, follower, transformer). The survey was used to test if the organizational role of public actors influences the development of SI initiatives, while case study was conducted to in-depth explore organizational and SI roles of public actors, their capacities, and the context for SI development.

Although survey results were statistically inconclusive (due to low response rate), they indicated that public actors:

- are directly engaged in the activities of SI initiatives, thus acting as an internal agent of SI
- have multiple organizational roles in SI
- their organizational roles influence the development of SI initiatives (both positively and negatively).

Insights from the survey were to a large extent confirmed by the case study and aligned with the existing literature. The case study focused on the Charcoal Land initiative that innovated and reconfigured traditional charcoal burning practices in Slovenia. Case study results showed that individual and organizational public actors were involved in the SI initiative. Although research on governance capacity and the SI until now mostly focused on organizational actors, the case study revealed that individual public actors were crucial for the development and success of the SI initiative.

One individual public actor had the role of an innovator (amongst several other roles), while all individual public actors acted as proxy agents of their organizations. Not only that they were fulfilling organizational tasks and duties, but individual public actors also served as a bridge between the public organization and SI initiative. Furthermore, individual public actors served for obtaining the support of the organization and for accessing the resources.

Individual public actors had to be adaptive in finding ways to obtain the resources for supporting the initiative. On several occasions, the regulatory framework did not allow for certain actions of public actors (i.e. direct financing), so they had to be creative in finding alternative ways for their organization to support the initiative (i.e. in-kind financing).

Further on, deliberation and learning seem to be of the highest importance for initiative success. Individual public actors engaged in the learning process with charcoal burners and co-constructed the narratives that presented the benefits of traditional charcoal burning. These benefits related to cultural heritage, active private forest owners, sustainable forestry, etc., and were strategically used by individual public actors in persuading others to support the initiative. That is how the initiative managed to gain resources, legitimization, and support of public actors, and to spread traditional charcoal burning from one small village throughout Slovenia.

The analysis of the context pointed out that the policy framework conditions do not favor the development of initiatives such as the Charcoal Land. As current Slovenian policies and laws support only the establishment of social enterprises, non-market forest-based initiatives such as the Charcoal land cannot be recognized as socially innovative. Exactly because of that, task-related governance capacities are not enough for the success of SI initiatives. If public actors are to be agents of SI, they need personality-based governance capacities. It is only through learning, deliberation, and adaptation that public actors will move from the leading role to the co-creation of SI.

Based on this research, it can be concluded that public actors still have a dominant role in the socially innovative forest-related activities (such as traditional charcoal burning) in Slovenia. Although on the individual level involved public actors manifested high personality-related capacities, with scaling up and out, these capacities seemed to reduce. On the local level, personality-related and task-related capacities seemed still to be balanced, but on the national level task-related capacities seem to prevail over personality-related.

As every innovation at some point has to be institutionalized (González and Healey, 2005), public actors on the national level (at least) maintain strong task-related capacities. This was also the case with traditional charcoal burning when public actors exhibited high regulatory capacity by regulated traditional charcoal burning through laws in 2011. These findings are also aligned with recent findings of Sergent et al., (2018) that clearly showed that the state actors still maintain a crucial role in forest governance. As in many other forestry cases, the case of the Charcoal Land initiative represents the hybrid mode of forest governance, where hierarchical and networked arrangements are combined together.

In general, the literature on SI published to date has paid little attention to public actors, despite the multiple roles and their significance for the development of SI initiatives. In combination with limited time resources, this created the principle difficulty I encountered. The lack of a consistent framework or theory for analyzing governance capacity for SI demanded to draft the framework and testing it through explorative case study and survey. Each of these methods imposed certain limitations of the research with respect to generalization.

Regardless of the limitation, the results of this dissertation provide possible avenues for future work. Future studies should explore in detail the roles of organizational and individual public actors in SI initiatives, their importance, and influence on initiative development, as well as governance sub-capacities and inter-relations among them. Specifically, it will be useful to conduct comparative case studies that would apply the analytical framework and to conduct a quantitative analysis that could be used for statistical testing of correlations among characteristics of public actors (i.e. level, sector), their roles, and other dependent variables (e.g. influence, importance, collaboration).

Despite the limitation, the research brings insights to both academics and practitioners. This dissertation is a contribution to the existing literature on SI in the forest-based sector; it enriches the knowledge on public actors' roles in SI and their governance capacities; it also points out the importance of individual public actors engaged in SI initiatives. For the practitioners, this

dissertation highlights that besides the task-related capacities, to engage and support SI, deliberative, learning and adaptive capacity are needed.

VII. References

Abbott, A., 1990. A Primer on Sequence Methods. Organ. Sci. 1, 375–392.

Agostini, M., Vieira, L., Tondolo, R. da, Tondolo, V., 2017. An Overview On Social Innovation Research: Guiding Future Studies. Brazilian Bus. Rev. 14, 385–402. doi:10.15728/bbr.2017.14.4.2

Arts, B., 2014a. Assessing forest governance from a "Triple G" perspective: Government, governance, governmentality*. For. Policy Econ. 49, 17–22. doi:10.1016/j.forpol.2014.05.008

Arts, B., 2014b. Assessing forest governance from a 'Triple G' perspective: Government, governance, governmentality. For. Policy Econ. 49, 17–22. doi:10.1016/j.forpol.2014.05.008

Arts, B., Behagel, J., Turnhout, E., de Koning, J., van Bommel, S., 2014. A practice based approach to forest governance. For. Policy Econ. 49, 4–11. doi:10.1016/j.forpol.2014.04.001

Arts, B., Goverde, H., 2006. The Governance Capacity of (new) Policy Arrangements: A Reflexive Approach, in: Institutional Dynamics in Environmental Governance. pp. 69–93.

Arts, B., van Tatenhove, J., 2006. Institutional dynamics in environmental governance, in: Arts, B., Leroy, P. (Eds.), Institutional Dynamics in Environmental Governance. Springer Netherlands, Dordrecht, pp. 21–43. doi:10.1007/1-4020-5079-8

Aurenhammer, P.K., Ščap, Triplat, M., Krajnc, N., Breznikar, A., 2018. Actors' Potential for Change in Slovenian Forest Owner Associations. Small-scale For. 17, 165–189. doi:10.1007/s11842-017-9381-2

Avdibegović, M., Vuletić, D., Stojanovska, M., Peri, L., Nonić, D., Keča, L., Petrović, N., Radosavljević, A., Marić, B., Bećirović, D., Mutabdžija, S., Brajić, A., Grašić, T., Nikolić, V., Pezdevšek Malovrh, Š., 2012. The adaptation of national forest policy systems in south-east European countries (Albania, Bosnia-Herzegovina, Croatia, Macedonia and Serbia) to new modes of international forest governance, in: Avdibegović, M., Buttoud, G., Marić, B., Shannon, M.A. (Eds.), Assessing Forest Governance in a Context of Change - Proceedings of Abstracts from the IUFRO Seminar Assessing Forest Governance in a Context of Change. Faculty of Forestry University of Sarajevo, Sarajevo, Bosnia and Herzegovina, pp. 1–4.

Avelino, F., Wittmayer, J.M., 2016. Shifting power relations in sustainability transitions: A multi-actor perspective. J. Environ. Policy Plan. 18, 628–649. doi:10.1080/1523908X.2015.1112259

Avelino, F., Wittmayer, J.M., Kemp, R., Haxeltine, A., 2017. Game-changers and transformative social innovation. Ecol. Soc. 22. doi:10.5751/ES-09897-220441

Avelino, F., Wittmayer, J.M., Pel, B., Weaver, P., Dumitru, A., Haxeltine, A., Kemp, R., Jørgensen, M.S., Bauler, T., Ruijsink, S., O'Riordan, T., 2019. Transformative social innovation and (dis)empowerment. Technol. Forecast. Soc. Change 145, 195–206. doi:10.1016/j.techfore.2017.05.002

Baccaro, L., Mele, V., 2009. Network Governance in International Organizations: The Case of

Global Codes of Conduct Network Governance in International Organizations: The Case of Global Corporate Codes.

Bacq, S., Eddleston, K.A., 2016. A Resource-Based View of Social Entrepreneurship: How Stewardship Culture Benefits Scale of Social Impact. J. Bus. Ethics 1–23. doi:10.1007/s10551-016-3317-1

Baker, S., Mehmood, A., 2013. Social Innovation and the Governance of Sustainable Places. Local Environ. 20, 321–334. doi:10.1080/13549839.2013.842964

Baker, W.E., Faulkner, R.R., 1991. Role as Resource in the Hollywood Film Industry. Am. J. Sociol. 97, 279–309. doi:10.1086/229780

Baldwin, R., Cave, M., 1999. Understanding Regulation: Theory, Strategy, and Practice. Oxford University Press, Oxford, UK.

Bandura, A., 2001. SOCIAL COGNITIVE THEORY: An Agentic Perspective. Annu. Rev. Psychol 52, 1–26.

Barbaroux, P., 2012. Identifying collaborative innovation capabilities within knowledge-intensive environments: Insights from the ARPANET project. Eur. J. Innov. Manag. 15, 232–258. doi:10.1108/14601061211220995

Berkes, F., 2007. Understanding uncertainty and reducing vulnerability: Lessons from resilience thinking. Nat. Hazards 41, 283–295. doi:10.1007/s11069-006-9036-7

Berkes, F., Adhikari, T., 2006. Development and conservation: indigenous businesses and the UNDP Equator Initiative. Int. J. Entrep. Small Bus. 3, 671. doi:10.1504/IJESB.2006.010920

Bernard, P., 1999. La cohésion sociale : critique dialectique d'un quasi-concept. Lien Soc. Polit. 41, 47–59. doi:10.7202/005057ar

Berzin, S.C., Pitt-Catsouphes, M., Peterson, C., 2014. Role of State-Level Governments in Fostering Social Innovation. J. Policy Pract. 13, 135–155. doi:10.1080/15588742.2014.901205

Bevir, M., 2013. A Theory of Governance, The Global, Area, and International Archive (GAIA); Studies in Governance. University of California Press, Berkeley. doi:10.5811/westjem.2011.5.6700

Bevir, M., 2010. Democratic Governance, Princeton University Press. doi:10.2307/j.ctt7sxxb

Bevir, M., Rhodes, R.A.W., Weller, P., 2003. Traditions of governance: interpreting the changing role of the public sector. Public Adm. 81, 1–17. doi:10.1111/1467-9299.00334

Bock, B.B., 2016. Rural Marginalisation and the Role of Social Innovation; A Turn Towards Nexogenous Development and Rural Reconnection. Sociol. Ruralis 56. doi:10.1111/soru.12119

Bogataj, N., Del Gobbo, G., 2015. Lifelong learning devices for sustainable local development. Comitato regionale dell'Enfap del Friuli Venezia Giulia.

Böhling, K., Arzberger, M.B., 2014. New modes of governance in Bavaria's alpine forests: The 'Mountain Forest Initiative' at work. For. Policy Econ. 49, 43–50. doi:10.1016/j.forpol.2014.01.004

Boonstra, J.J., 2004. Dynamics of Organizational Change and Learning. John Wiley & Sons, Ltd., New York, USA.

Bosworth, G., Rizzo, F., Marquardt, D., Strijker, D., Haartsen, T., Thuesen Aagaard, A., 2016. Identifying social innovations in European local rural development initiatives. Innov. Eur. J. Soc. Sci. Res. 29, 441–461. doi:10.1080/13511610.2016.1176555

Britten, N., Campbell, R., Pope, C., Donovan, J., Morgan, M.Y., Pill, R., 2002. Using meta ethnography to synthesise qualitative research: a worked example. J. Health Serv. Res. Policy 7, 209–215.

Brukas, V., 2015. New World, Old Ideas—A Narrative of the Lithuanian Forestry Transition. J. Environ. Policy Plan. 17, 495–515. doi:10.1080/1523908X.2014.993023

Bryce, R., Valero, D., Price, M., 2017. Social Innovation in Marginalised Rural Areas Call : H2020-ISIB-2015-2 Innovative , Sustainable and Inclusive Bioeconomy.

Buttoud, G., Giessen, L., Buttoud, G., 2014. Defining and assessing forest governance. For. Policy Econ. 49, 1–3. doi:10.1016/j.forpol.2014.11.009

Buttoud, G., Kouplevatskaya-Buttoud, I., Slee, B., Weiss, G., 2011. Barriers to institutional learning and innovations in the forest sector in Europe: Markets, policies and stakeholders. For. Policy Econ. 13, 124–131. doi:10.1016/j.forpol.2010.05.006

Butzin, A., Terstriep, J., 2018. ACTORS AND ROLES IN SOCIAL INNOVATION, in: Atlas of Social Innovation – New Practices for a Better Futur. Sozialforschungsstelle, TU Dortmund University, Dortmund, pp. 78–81.

Cajaiba-Santana, G., 2014. Social innovation: Moving the field forward. A conceptual framework. Technol. Forecast. Soc. Change 82, 42–51. doi:10.1016/j.techfore.2013.05.008

Callero, P.L., 1994. From Role-Playing to Role-Using: Understanding Role as Resource. Soc. Psychol. Q. 57, 228–243. doi:10.2307/2786878

Cambridge English Dictionary, 2018. capacity Meaning [WWW Document]. Cambrige Dict. URL https://dictionary.cambridge.org/dictionary/english/capacity (accessed 6.1.18).

Campbell, R., Pound, P., Pope, C., Britten, N., Pill, R., Morgan, M., Donovan, J., 2003. Evaluating meta-ethnography: a synthesis of qualitative research on lay experiences of diabetes and diabetes care. Soc. Sci. Med. 56, 671–684.

Campos, I.S., Vizinho, A., Truninger, M., Lopes, G.P., 2016. Converging for deterring land abandonment: a systematization of experiences of a rural grassroots innovation. Community Dev. J. 51, 552–570. doi:10.1093/cdj/bsv051

Capacity | Definition of Capacity by Merriam-Webster [WWW Document], 2018. URL https://www.merriam-webster.com/dictionary/capacity (accessed 6.2.18).

Capano, G., Howlett, M., Ramesh, M., 2015. Varieties of Governance - Dynamics, Strategies, Capacities. Palgrave Macmillan.

Chalmers, D., 2012. Social Innovation: An Exploration of the Barriers Faced by Innovating Organizations in the Social Economy. Local Econ. 28, 18–33. doi:10.1177/0269094212463677

Christensen, T., Lægreid, P., Rykkja, L.H., 2016. Organizing for Crisis Management: Building Governance Capacity and Legitimacy. Public Adm. Rev. 76, 887–897. doi:10.1111/puar.12558

Cieslik, K., 2016. Moral Economy Meets Social Enterprise Community-Based Green Energy Project in Rural Burundi. World Dev. 83, 12–26.

doi:10.1016/J.WORLDDEV.2016.03.009

Coleman, J., 1990. Foundations of Social Theory. Harvard University Press.

Čolić, R., 2014. EVALUATION OF THE CAPACITY DEVELOPMENT OF ACTORS WITHIN PARTICIPATORY PLANNING PROCESS. Spat. Int. Rev. UDC 711449711, 45–50. doi:10.2298/SPAT1431045C

Council for Social Enterprenaurship, 2013. Strategy for the Development of Social Entrepreneurship for the period 2013 – 2016.

Crabbe, A., Leroy, P., 2008. The Handbook of Environmental Policy Evaluation. Earthscan, London, UK.

Dang, T.K.P., Visseren-Hamakers, I.J., Arts, B., 2016. A framework for assessing governance capacity: An illustration from Vietnam's forestry reforms. Environ. Plan. C-GOVERNMENT POLICY 34, 1154–1174. doi:10.1177/0263774X15598325

Dang, T.K.P., Visseren-Hamakers, I.J., Arts, B., 2015. A framework for assessing governance capacity: An illustration from Vietnam's forestry reforms. Environ. Plan. C Gov. Policy. doi:10.1177/0263774X15598325

de Boer, B., Hamers, J.P.H., Zwakhalen, S.M.G., Tan, F.E.S., Beerens, H.C., Verbeek, H., 2017. Green Care Farms as Innovative Nursing Homes, Promoting Activities and Social Interaction for People With Dementia. J. Am. Med. Dir. Assoc. 18, 40–46. doi:10.1016/j.jamda.2016.10.013

Demming, K., 2016. Making Space for Social Innovation: What we can learn from the midwifery movement. Ontario Institute for Studies in Education of the University of Toronto.

Denzin, N.K., 2017. Triangulation: A Case for Methodological and Combination Evaluation-Introduction, in: Denzin, N.K. (Ed.), Sociological Methods: A Sourcebook. Routledge.

Dewey, J., 1938. Logic: The Theory Of Inquiry. Henry Holt and Company, Inc., New York.

Dewulf, A., Termeer, C., 2015. Governing the future? The potential of adaptive delta management to contribute to governance capabilities for dealing with the wicked problem of climate change adaptation. J. WATER Clim. Chang. 6, 759–771. doi:10.2166/wcc.2015.117

Dey, P., Steyaert, C., 2014. Rethinking the Space of Ethics in Social Entrepreneurship: Power, Subjectivity, and Practices of Freedom. doi:10.1007/s10551-014-2450-y

DiGaetano, A., Strom, E., 2003. Comparative Urban Governance: An Integrated Approach, Urban Affairs Review. doi:10.1177/1078087402238806

Dobšinská, Z., Rathke, J., Weber, N., 2015. COST FP 1207 : Orchestrating Forest-related Policy Analysis in Europe (ORCHESTRA) SYNTHESIS REPORT OF WG1 COUNTRY REPORTS COST FP 1207 : Orchestrating Forest-related Policy Analysis in Europe (ORCHESTRA) SYNTHESIS REPORT OF WG1 COUNTRY REPORTS.

Dool, L. Van Den, Hulst, M. Van, Schaap, L., van den Dool, L., van Hulst, M., Schaap, L., 2010. More than a Friendly Visit: A New Strategy for Improving Local Governing Capacity. Local Gov. Stud. 36, 551–568. doi:10.1080/03003930.2010.494111

Drisko, J.W., Maschi, T., 2016. Content Analysis, Pocket Guide to Social Work Research Methods. Oxford University Press, Oxford, UK.

Earthy, S., Cronin, A., 2008. NARRATIVE ANALYSIS, in: Researching Social Life.

Edwards-Schachter, M., Wallace, M.L., 2017a. 'Shaken, but not stirred': Sixty years of defining social innovation. Technol. Forecast. Soc. Change 119, 64–79. doi:10.1016/j.techfore.2017.03.012

Edwards-Schachter, M., Wallace, M.L., 2017b. '□Shaken, but not Stirred'□: Sixty Years of Defining Social Innovation. Technol. Forecast. Soc. Chang. 119, 64–79. doi:10.1016/j.techfore.2017.03.012

Edwards-Schachter, M.E., Matti, C.E., Alcántara, E., 2012. Fostering Quality of Life through Social Innovation: A Living Lab Methodology Study Case. Rev. Policy Res. 29, 672–692. doi:10.1111/j.1541-1338.2012.00588.x

EFI, 2014. Future of the European Forest-Based Sector: Structural Changes Towards Bioeconomy. Joensuu, Finland.

Emirbayer, M., Mische, A., 1998. What Is Agency? Am. J. Sociol. 103, 962–1023.

ENSIS – European Network for Social Innovation and Solidarity, 2018. EU Policies in Social Innovation [WWW Document]. URL http://en-sis.eu/policy-areas/eu-policy-initiatives-in-social-innovation/ (accessed 3.12.18).

Eriksen, S., Selboe, E., 2012. The social organisation of adaptation to climate variability and global change: The case of a mountain farming community in Norway. Appl. Geogr. 33, 159–167. doi:10.1016/J.APGEOG.2011.10.003

Eriksson, M.., Einarsson, T., Wijkström, F., 2014. Report on the European Social Innovation Policy Framework in Light of Third Sector & Civil Society Actors. Deliverable 1.2 of the project: 'Impact of the Third Sector as Social Innovation' (ITSSOIN). Brussels: European Commission, DG Research.

European Commisssion, 2013. Guide to Social Innovation. Brussels, Belgium.

Ferreira, J.J., Fernandes, C.I., Oliveira, V.R.M., 2018. Social innovation in public organisations: The perspectives of managers, in: Peris-Ortiz, M., Gómez, A.J., Marquez, P. (Eds.), Strategies and Best Practices in Social Innovation: An Institutional Perspective. Springer, e-book, pp. 31–46. doi:10.1007/978-3-319-89857-5_3

Finger-Stich, A., 2005. Social Agency in Alpine Communal Forests. Local actors' interactions with communal forests and participation in communal forestry in the French and Swiss Alps.

Fischer, F., Miller, G.J., Sidney, M.S., 2007. Handbook of public policy analysis : theory, politics, and methods, Methods. doi:10.4135/9781848608054

Fischer, L.B., Newig, J., 2016. Importance of actors and agency in sustainability transitions: A systematic exploration of the literature. Sustain. 8. doi:10.3390/su8050476

Fleetwood, S., 2008. Institutions and social structures. J. Theory Soc. Behav. 38, 241–265. doi:10.1111/j.1468?5914.2008.00370.x

Fougère, M., Harding, N., 2012. On the limits of what can be said about "innovation" - Research portal, in: Sveiby, K.-E., Gripenberg, P., Segercrantz, B. (Eds.), Challenging the Innovation Paradigm. Routledge, London, pp. 15–36.

Fougère, M., Segercrantz, B., Seeck, H., 2017. A critical reading of the European Union's social innovation policy discourse: (Re)legitimizing neoliberalism. Organization 24, 819–843. doi:10.1177/1350508416685171

Frischtak, L.L., 1994. Governance Capacity and Economic Reform in Developing Countries.

Fukuyama, F., 2016. Governance: What Do We Know, and How Do We Know It? Annu. Rev. Polit. Sci. 19, 89–105. doi:10.1146/annurev-polisci-042214-044240

García-Llorente, M., Rubio-Olivar, R., Gutierrez-Briceño, I., 2018. Farming for life quality and sustainability: A literature review of green care research trends in Europe. Int. J. Environ. Res. Public Health 15, 1282–1300. doi:10.3390/ijerph15061282

Gartner, M., Merkač Skom, Marjana; Letonja, M., Stritar, T., Podmenik, D., Vadnjal, M., Rihtaršić, T., 2015. Social Entrepreneurship in Slovenia: State of the Art Report, Innovate and Ideate for Social Entrepreneurship, Project No. 2015-3-BG01-KA205-022771. Ljubljana, Slovenia.

Giancarlo, M., 2017. The Challenge of Servicing Social Enterprises: The Case of Banca Prossima – Intesa Sanpaolo Group, in: Giacomelli, J. (Ed.), 5th Italian Business Forum: From Social Entreprise to Social Innovation. Giacomelli Media Management and Consulting Ltd., Ljubljana, Slovenia, pp. 12–14.

Gissendanner, S., 2004. Mayors, Governance Coalitions, and Strategic Capacity: Drawing Lessons from Germany for Theories of Urban Governance. Urban Aff. Rev. 40, 44–77. doi:10.1177/1078087404267188

Gonzalez, S., Healey, P., 2005. A sociological institutionalist approach to the study of innovation in governance capacity. URBAN Stud. 42, 2055–2069. doi:10.1080/00420980500279778

González, S., Healey, P., 2005. A Sociological Institutionalist Approach to the Study of Innovation in Governance Capacity. Urban Stud. 42, 2055–2069. doi:10.1080/00420980500279778

Goodman, L.A., 1961. Snowball Sampling. Ann. Math. Stat. 32, 148–170. doi:10.1214/aoms/1177705148

Górriz-Mifsud, E., Burns, M., Marini Govigli, V., 2019. Civil society engaged in wildfires: Mediterranean forest fire volunteer groupings. For. Policy Econ. 102, 119–129. doi:10.1016/j.forpol.2019.03.007

Górriz-Mifsud, E., Marini Govigli, V., Ravazzoli, E., Dalla Torre, C., Da Re, R., Secco, L., Pisani, E., Ludvig, A., Weiss, G., Akinsete, E., Barlagne, C., Baselice, A., Bengoumi, M., Brnkalakova, S., Dijkshoorn-Dekker, M., Egartner, S., Gramm, V., Hayder, M., Herrmann, P., Kozova, M., Lopolito, A., Nawar, M., Niedermayr, J., Perlik, M., Pfusterschmid, S., Polman, N., Prokofieva, I., Prosperi, M., Rodríguez, C., Sarkki, S., Slee, B., Spacek, M., Udovč, A., Vassilopoulos, A., Wagner, K., 2018. Deliverable D5.1 Case Study Protocols and Final Synthetic Description for Each Case Study.

Gough, D., Oliver, S., Thomas, J., 2012. Introducing systematic reviews, in: Gough, D., Oliver, S., Thomas, J. (Eds.), An Introduction to Systematic Reviews. SAGE, pp. 1–16.

Goverment of Slovenia, ;, 2016. Forest Act.

Goverment Office for Development and European Cohesion Policy, 2017. The Slovenian Development Strategy 2030.

Governmental Office for Development and European Cohesion Policy, 2015a. Operational Programme for the Implementation of the EU Cohesion Policy 2014-2020.

Governmental Office for Development and European Cohesion Policy, 2015b. Slovenia's Smart Specialisation Strategy (S4).

Graham, I.D., Logan, J., Harrison, M.B., Straus, S.E., Tetroe, J., Caswell, W., Robinson, N.,

Cogo, E., Antony, J., Straus, S.E., 2006. Lost in knowledge translation: Time for a map? J. Contin. Educ. Health Prof. 26, 13–24. doi:10.1002/chp.47

Grant, M.J., Booth, A., 2009. A typology of reviews: An analysis of 14 review types and associated methodologies. Health Info. Libr. J. 26, 91–108. doi:10.1111/j.1471-1842.2009.00848.x

Grimm, R., Fox, C., Baines, S., Albertson, K., 2013. Social innovation, an answer to contemporary societal challenges? Locating the concept in theory and practice. Innov. Eur. J. Soc. Sci. Res. 26, 436–455. doi:10.1080/13511610.2013.848163

Harrisson, D., Chaari, N., Comeau-Vallée, M., 2012. Intersectoral Alliance and Social Innovation: When Corporations Meet Civil Society. Ann. Public Coop. Econ. 83, 1–24. doi:10.1111/j.1467-8292.2011.00452.x

Hatak, I., Lang, @bullet Richard, Roessl, D., Lang, R., 2016. Trust, Social Capital, and the Coordination of Relationships Between the Members of Cooperatives: A Comparison Between Member-Focused Cooperatives and Third-Party-Focused Cooperatives. Voluntas 27, 1218–1241. doi:10.1007/s11266-015-9663-2

Hatzl, S., Seebauer, S., Fleiß, E., Posch, A., 2016. Market-based vs. grassroots citizen participation initiatives in photovoltaics: A qualitative comparison of niche development. doi:10.1016/j.futures.2016.03.022

Haubenhofer, D.K., Elings, M., Hassink, J., Hine, R.E., 2010. The Development of Green Care in Western European Countries. Explor. J. Sci. Heal. 6, 106–111. doi:10.1016/j.explore.2009.12.002

Haxeltine, A., Jørgensen, M.S., Pel, B., Dumitru, A., Avelino, F., Bauler, T., Blanco, I.L., Chilvers, J., Cipolla, C., Dorland, J., Elle, M., Garido, S., Kemp, R., Kunze, I., Longhurst, N., Pataki, G., Rach, S., Renema, J., Ruijsink, S., Strasser, T., Tawakol, D., Weaver, P., Wittmayer, J.M., 2016. On the agency and dynamics of transformative social innovation (No. Grant agreement no: 613169), TRANSIT Working Paper No. 7.

Healey, P., 2006a. Transforming governance : Challenges of institutional adaptation and a new politics of space. Eur. Plan. Stud. 14, 299–320. doi:10.1080/09654310500420792

Healey, P., 2006b. Transforming governance: Challenges of institutional adaptation and a new politics of space1. Eur. Plan. Stud. 14, 299–320. doi:10.1080/09654310500420792

Héritier, A., Lehmkuhl, D., 2008. The shadow of hierarchy and new modes of governance. J. Public Policy. doi:10.1017/S0143814X08000755

Hewitt, R.J., Bradley, N., Baggio Compagnucci, A., Barlagne, C., Ceglarz, A., Cremades, R., McKeen, M., Otto, I.M., Slee, B., 2019. Social Innovation in Community Energy in Europe: A Review of the Evidence. Front. Energy Res. 7, 1–27. doi:10.3389/fenrg.2019.00031

Hewson, M., 2010. Agency, in: Mills, Albert, J.., Eurepos, G., Wiebe, E. (Eds.), Encyclopedia of Case Study Research. Sage Publications Inc., Tousand Oaks,California, pp. 12–16.

Hilbert, R.A., 1981. Toward an improved understanding of "role" Theory Soc. 10, 207–226. doi:10.1007/BF00139892

Höher, M., Tretter, H., Athavale, S., Strimitzer, L., Krizmanić, M., Vrček, V., Šegon, V., Markovska, N., Bozhikaliev, V., Aleksov, T., Dimov, L., Sazdovski, I., Jerotić, S., Glusce, M., Krajnc, N., 2017. Deliverable N° 4.1: Techno-economical assessment reports of bioenergy value chains and their potentials in the target villages. Vienna, Austria.

Holtz, G., 2014. Generating Social Practices. J. Artif. Soc. Soc. Simul. 17, 1–11.

Horigue, V., Fabinyi, M., Pressey, R.L., Foale, S., Aliño, P.M., 2016. Influence of Governance Context on the Management Performance of Marine Protected Area Networks. Coast. Manag. 44, 71–91. doi:10.1080/08920753.2016.1116678

Howaldt, J., Kaletka, C., Schröder, A., Zirngiebl, M., 2018. Atlas of Social Innovation – New Practices for a Better Future. Sozialforschungsstelle, TU Dortmund University, Dortmund.

Howlett, M., Ramesh, M., 2016. Achilles' heels of governance: Critical capacity deficits and their role in governance failures. Regul. Gov. 10, 301–313. doi:10.1111/rego.12091

Howlett, M., Ramesh, M., 2014. The two orders of governance failure: Design mismatches and policy capacity issues in modern governance. Policy Soc. 33, 317–327. doi:10.1016/j.polsoc.2014.10.002

Howlett, M., Vince, J., Del Río, P., 2017. Policy Integration and Multi-Level Governance: Dealing with the Vertical Dimension of Policy Mix Designs. Polit. Gov. 5, 69. doi:10.17645/pag.v5i2.928

Hren, A., 2015. Trajnostno Podjetništvo s Širšimi Družbenimi Učinki- Slovenska Izkušnja, in: Hras, A., Mulej, Matjaž;Lorbek, D. (Eds.), 10. IRDO Mednarodne Konference: Družbena Odgovornost in Izzivi Časa 2015: Načrtovanje in Poročanje o Družbeni Odgovornosti, Novi Znanstveni in Strokovni Pogledi s Primeri Dobrih Praks. nštitut za razvoj družbene odgovornosti (IRDO), Mariobor, Slovenia, p. 66.

Hren, A., n.d. Trajnostno Podjetništvo s Širšimi Družbenimi Učinki- Slovenska Izkušnja.

Hubert, A., 2010a. Empowering people, driving change. Social innovation in the European Union., Bepa. Luxembourg: Publications Office of the European Union. doi:10.2796/13155

Hubert, A., 2010b. Empowering people, driving change: Social innovation in the European Union, Bureau of European Policy Advisers. doi:10.2796/13155

Hughes, A., Gleeson, D., Legge, D., Lin, V., 2017. Governance and policy capacity in health development and implementation in Australia. doi:10.1016/j.polsoc.2015.11.001

Innes, J.L., 2009. The promotion of "innovation" in forestry: a role for government or others? Environ. Sci. 6, 201–215. doi:10.1080/19438150903090517

Jenson, J., 2017. Modernising the European Social Paradigm: Social Investments and Social Entrepreneurs. Jnl Soc. Pol 46, 31–47. doi:10.1017/S0047279416000428

Johnson, D.S., 2010. Institutional adaptation as a governability problem in fisheries: patron-client relations in the Junagadh fishery, India. Fish Fish. 11, 264–277. doi:10.1111/j.1467-2979.2010.00376.x

Kjær, A.M., 2004. Governance. Polity Press, Cambridge.

Kluvánková, T., Brnkaľáková, S., Špaček, M., Slee, B., Nijnik, M., Valero, D., Miller, D., Bryce, R., Kozová, M., Polman, N., Szabo, T., Gežík, V., 2018. Understanding social innovation for the well-being of forest-dependent communities: A preliminary theoretical framework. For. Policy Econ. 97, 163–174. doi:10.1016/j.forpol.2018.09.016

Knill, C., Lehmkuhl, D., 2002. Private actors and the state: Internationalization and changing patterns of governance 15, 41–63.

Knoepfel, P., Larrue, C., Hill, M., 2007. Public Policy Analysis. The Policy Press, University

of Bristol, Bristol, UK.

Konda, I., Starc, J., Rodica, B., 2015. Development of Social Innovations and Their Marketing: A Slovenian Case Study. Informatologia 48, 154–168.

Krippendorff, K., 2004. Content Analysis: An Introduction to Its Methodology, 2nd ed. SAGE Publications, Thousand Oaks, CA.

Krott, M., 2005. Forest policy analysis, Statewide Agricultural Land Use Baseline 2015. doi:10.1017/CBO9781107415324.004

Kubeczko, K., Rametsteiner, E., Weiss, G., 2006. The Role of Sectoral and Regional Innovation Systems in Supporting Innovations in Forestry. For. Policy Econ. 8, 704–715. doi:10.1016/j.forpol.2005.06.011

Lafortune, M.È., Collin, J.P., 2011. Building metropolitan governance capacity: The case of the Communauté métropolitaine de Montréal. Can. Public Adm. 54, 399–420. doi:10.1111/j.1754-7121.2011.00182.x

Lang, R., Roessl, D., Weismeier-Sammer, D., 2015. Conceptualizing and Researching Governance in Public and Non-Profit Organizations. Public Non-Profit Gov. 1, 3–32.

Lawrence, A., 2009. Forestry in transition: Imperial legacy and negotiated expertise in Romania and Poland. For. Policy Econ. 11, 429–436. doi:10.1016/j.forpol.2009.02.003

Lekenik, I., Juan-Manuel Ugalde, D.R.-W.R.E., Konstanze Stein - KEA, Jens Adle, E.-M.G.-G., Martina Krizmanić, Valerija Vrček, V.Š.– R., Vladimir Gjorgievski, Natasa Markovska, V.B.– S., Daniel-Alexandru Cosnita, Maria Gaspar, Boglarka Vajda, L.V.–G., Miodrag Gluscevic , Tanja Cvetkov, I.M.– S., Todora Rogelja, Darja Kocjan, Dr. Nike Krajnc, Š.Š.– G., 2016. LOCAL AND REGIONAL FRAMEWORK CONDITIONS TO SUPPORT THE ESTABLISHMENT OF A "BIOENERGY VILLAGE." Muenchen, Germany.

Linton, R., 1934. The Study of Man - An Introduction. Appelton-Century-Crofts, Inc., New York.

Liu, G., Ko, W.-W., 2012. Organizational Learning and Marketing Capability Development: A Study of the Charity Retailing Operations of British Social Enterprise. Nonprofit Volunt. Sect. Q. 41, 580–608. doi:10.1177/0899764011411722

Liubachyna, A., Bubbico, A., Secco, L., Pettenella, D., 2017a. Management Goals and Performance: Clustering State Forest Management Organizations in Europe with Multivariate Statistics. Forests 8, 504. doi:10.3390/f8120504

Liubachyna, A., Secco, L., Pettenella, D., 2017b. Reporting practices of State Forest Enterprises in Europe. For. Policy Econ. 78, 162–172. doi:10.1016/j.forpol.2017.01.019

Lodge, M., Wegrich, K., 2014. The Problem-Solving Capacity of the Modern State: Governance Challenges and Administrative Capacities Chapter Abstracts. Oxford University Press.

Loe, R. De, Armitage, D., Plummer, R., Davidson, S., Moraru, L., 2009. From Government to Governance : A State-of-the- Art Review of Environmental Governance. Guelph, ON.

Ludvig, A., Corradini, G., Asamer-Handler, M., Pettenella, D., Verdejo, V., Martínez, S., Weiss, G., 2016a. The Practice of Innovation: The Role of Institutions in Support of Non-Wood Forest Products. Bioprod. Bus. 1, 73–84.

Ludvig, A., Hujala, T., Živojinović, I., Weiss, G., 2019. Social and Institutional Innovations in

Family Forestry, in: Hujala, T., Toppinen, A., J. Butler, B. (Eds.), Services in Family Forestry. Springer International Publishing, Cham, pp. 269–285. doi:10.1007/978-3-030-28999-7_13

Ludvig, A., Tahvanainen, V., Dickson, A., Evard, C., Kurttila, M., Cosovic, M., Chapman, E., Wilding, M., Weiss, G., 2016b. The practice of entrepreneurship in the non-wood forest products sector: Support for innovation on private forest land. For. Policy Econ. 66, 31–37. doi:10.1016/J.FORPOL.2016.02.007

Ludvig, A., Weiss, G., Sarkki, S., Nijnik, M., Živojinović, I., 2018a. Mapping European and forest related policies supporting social innovation for rural settings. For. Policy Econ. 97, 146–152. doi:10.1016/j.forpol.2018.09.015

Ludvig, A., Weiss, G., Živojinović, I., Nijnik, M., Miller, D., Barlagne, C., Perlik, M., Hermann, P., Egger, T., Dalla Torre, C., Streifeneder, T., Ravazzoli, E., Sfeir, P., Lukesch, R., Wagner, K., Egartner, S., Slee, B., Clotteau, M., 2017. Report D6.1: Political Framework Conditions, Policies and Instruments for SIs in Rural Areas.

Ludvig, A., Wilding, M., Thorogood, A., Weiss, G., 2018b. Social innovation in the Welsh Woodlands: Community based forestry as collective third-sector engagement. For. Policy Econ. 95, 18–25. doi:10.1016/j.forpol.2018.07.004

Lynch, K.D., 2007. Modeling Role Enactment: Linking Role Theory and Social Cognition. J. Theory Soc. Behav. 37, 379–399.

Malovrh, Š.P., Nonić, D., Glavonjić, P., Nedeljković, J., Avdibegović, M., Krč, J., 2015. Private Forest Owner Typologies in Slovenia and Serbia: Targeting Private Forest Owner Groups for Policy Implementation. Small-scale For. 14, 423–440. doi:10.1007/s11842-015-9296-8

Marohabutr, T., 2016. Social capital in Thai social enterprises and related communities. Asia-Pacific Soc. Sci. Rev. 16, 18–31.

Marot, N., 2010. Planning capacity of Slovenian municipalities. Acta Geogr. Slov. 50, 131–157. doi:10.3986/AGS50106

Marques, P., Morgan, K., Richardson, R., 2018. Social innovation in question: The theoretical and practical implications of a contested concept. Environ. Plan. C Polit. Sp. 36, 496–512. doi:10.1177/2399654417717986

Masiero, M., 2013. From failure to value: Towards estimation, accounting and sharing of the Total Economic Value for Mediterranean forests.

Massey, A., Johnston-Miller, K., 2016. Governance: Public governance to social innovation? Policy Polit. 44, 663–675. doi:10.1332/030557314X14042230109592

Mayring, P., 2014. Qualitative Content Analysis Theoretical Foundation, Basic Procedures and Software Solution. e-book, Klagenfurt, Austria.

Mayring, P., 2000a. Qualitative Content Analysis. Forum Qual. Soc. Res. 1, 1–10. doi:10.1111/j.1365-2648.2007.04569.x

Mayring, P., 2000b. Qualitative Content Analysis. Forum Qulatiative Soc. Res. 1, 10.

Mees, H.L.P., Driessen, P.P.J., 2011. Adaptation to climate change in urban areas: Climate-greening London, Rotterdam, and Toronto. Clim. Law 2, 251–280. doi:10.3233/CL-2011-036

Melnykovych, M., Nijnik, M., Soloviy, I., Nijnik, A., Sarkki, S., Bihun, Y., 2018. Social-

ecological innovation in remote mountain areas: Adaptive responses of forest-dependent communities to the challenges of a changing world. Sci. Total Environ. 613–614, 894–906. doi:10.1016/j.scitotenv.2017.07.065

Mikhailovich Sergey, V., Ayvarovna Gamidullaeva, L., KerimovnaRostovskaya, T., 2017. The Challenge of Social Innovation: Approaches and Key Mechanisms of Development. Eur. Res. Stud. J. Vol. XX 20, 25–45.

Miklič, B., 2010. Oglarska Pot in Oglarjenje na Dolah. Univerza v Ljubljani Biotehniška Fakulteta Oddelek za Gozdarstvo in Obnovljive Gozdne Vire.

Ministry of Agriculture and Environment, Ministry of Economic Development and Technology, 2012. Action Plan for Increasing Competitiveness of Forest Wood Chains in Slovenia to 2020 "Wood is Beautiful."

Ministry of Agriculture Forestry and Food, 2018. Sporočila za javnost 16. 2. 2018 [WWW Document]. Rural Dev. Program. 2014-2020. URL https://www.program-podezelja.si/sl/136-infoteka/nove-novice/867-16-2-2018-v-sloveniji-uvajamo-garancije-kot-novo-obliko-podpor-v-okviru-programa-razvoja-podezelja-2014-2020 (accessed 2.20.18).

Ministry of Agriculture Forestry and Food, 2017a. Opearational Programme for the Implementation of the National Forest Programme 2017-2021.

Ministry of Agriculture Forestry and Food, 2017b. Rural Development Programme of the Republic of Slovenia for the Period 2014-2020.

Ministry of Economic Development and Technology, 2018. Database: Register of Social Enterprises in Slovenia [WWW Document]. URL http://www.mgrt.gov.si/si/delovna_podrocja/socialno_podjetnistvo/evidenca_so_p/ (accessed 2.25.18).

Ministry of Environment and Spatial Planning, 2016. Strategic Framework for Climate Change Adaptation.

Ministry of Environment and Spatial Planning, 2015. Framework Program for the Transition to the Green Economy with the Action Plan for the Implementation of the Framework Program and Plan of Activities of Ministries and Government Services 2015-2016.

Ministry of Labour Family Social Affairs and Equal Opportunities, 2014. Program of Measures 2014-2015 for the Implementation of the Strategy for the Development of Social Enterprise for the Period 2013-2016.

MIZKS, 2012. Opis enote žive kulturne dediščine - oglarstvo.

Moore, M.-L., Westley, F.R., 2001. Public Sector Policy and Strategies for Facilitating Social Innovation. Innovation 1–11.

Moore, M.L., Westley, F., 2011. Surmountable chasms: Networks and social innovation for resilient systems. Ecol. Soc. 16. doi:Article

Moore, M.L., Westley, F.R., Tjornbo, O., Holroyd, C., 2011. The loop, the lens, and the lesson: Using resilience theory to examine public policy and social innovation. Soc. Innov. Blurring Boundaries to Reconfigure Mark. 89–113. doi:10.1057/9780230367098

Moulaert, F., 2013. The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research. Edward Elgar Publishing Ltd., Cheltentham, UK.

Moulaert, F., Martinelli, F., Swyngedouw, E., González, S., 2005. Towards Alternative Model(s) of Local Innovation. Urban Stud. 42, 1969–1990.

Moulaert, F., Mehmood, A., MacCallum, D., Leubolt, B., 2017. Social Innovation as a Trigger for Transformations - The Role of Research. European Commission, Luxembourg: Publications Office of the European Union. doi:10.2777/68949

Mulgan, G., Tucker, S., Ali, R., Sanders, B., 2007. Social Innovation: What It Is, Why It Matters and How It Can Be Accelerated. The Young Foundation, London, UK.

Nelles, J., 2013. Cooperation and Capacity? Exploring the Sources and Limits of City-Region Governance Partnerships. Int. J. Urban Reg. Res. 37, 1349–1367. doi:10.1111/j.1468-2427.2012.01112.x

Neumeier, S., 2017. Social innovation in rural development: identifying the key factors of success. Geogr. J. 183, 34–46. doi:10.1111/geoj.12180

Neumeier, S., 2012. 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. Ruralis 52, 48–69. doi:10.1111/j.1467-9523.2011.00553.x

Nicholls, A., Simon, J., Gabriel, M., 2015. New Frontiers in Social Innovation Research, Palgrave Macmillan. Palgrave Macmillan, London, UK. doi:10.1057/9781137506801

Nicolini, D., 2012. Practice Theory , Work , and Organization. Oxford University Press, Oxford.

Nijnik, M., Nijnik, A., Sarkki, S., Muñoz-Rojas, J., Miller, D., Kopiy, S., 2018. Is forest related decision-making in European treeline areas socially innovative? A Q-methodology enquiry into the perspectives of international experts. For. Policy Econ. 92, 210–219. doi:10.1016/j.forpol.2018.01.001

Nijnik, M., Secco, L., Miller, D., Melnykovych, M., 2019. Can social innovation make a difference to forest-dependent communities? For. Policy Econ. 100, 207–213. doi:10.1016/j.forpol.2019.01.001

Noblit, G.W., Hare, R.D., 2017. A Meta-Ethnographic Approach.

Nybakk, E., Lawrence, A., Weiss, G., 2015. Innovation in Forest Management for New Forest Owner Types – A Literature Review.

Obcina Litija, ;, 2016. DOLGOROČNI RAZVOJNI PROGRAM OBČINE LITIJA ZA OBDOBJE 2016-2022: DOVOLJ DOBRO JE SAMO NAJBOLJŠE. Litija.

Official Gazette No. 57/15 in 36/18, n.d. Decree on subsidiary activities on farms.

Official Gazette of RS No. 104/15, 32/16, 66/16, 14/17, 38/17 in 40/17 – popr., ;, 2015. Decree on the Measures for Capital Investments and on the Sub-Measure for the Support for Investments into Forestry Technologies, Processing, Mobilization, and Marketing of Forestry Products Pursuant to the Rural Development Programme of the Republic of S.

Official Gazette of RS No. 19/16, 2016. II Javni Razpis Mikrokrediti za Podjetja s Statusom Socialnega Podjetja – P7 sop 2016.

Official Gazette of RS No. 2/12, 2012. Amendments to the SRS 2006 and the SRS 40 (2012) - Accounting Solutions in Social Enterprises (2012).

Official Gazette of RS No. 35/13, 2013. Regulation on the Monitoring of the business of social enterprises.

Official Gazette of RS No. 9/16, 2016. Management of State Forests Act.

Official Gazette of RS No.20/2011, 2011. Law on Social Enterprenaurship.

Official Gazette of RS No.42/15, 2015. Decree on the Implementation of Community-Led Local Development in the Programming Period 2014-2020.

Official Gazette of RS No.45/14, 2014. Decree Amending the Decree Determining Social Entrepreneurship Activities.

Official Gazette of RS No.54/12 and 54/14, 2014. Decree determining social entrepreneurship activities.

Official Gazette of RS No 111/07, 2007. Resolution on National forest Programme.

Parrado, S., 2014. Analytical Capacity, in: Lodge, M., Wegrich, K. (Eds.), The Problem-Solving Capacity of the Modern State: Governance Challenges and Administrative Capacities. Oxford University Press, pp. 86–105.

Pezdevšek Malovrh, Š., Kumer, P., Glavonjić, P., Nonić, D., 2017. Different Organizational Models of Private Forest Owners as a Possibility to Increase Wood Mobilization in Slovenia & Serbia. Croat. J. For. 38, 1–14.

Pezdevšek Malovrh, Š., Laktić, T., 2017. Poslovno Povezovanje Lastnikov Gozdov na Primeru Društva Lastnikov Gozdov Pohorje-Kozjak (Forest Owners ' Business Integration as in the Case of Pohorje- Kozjak Forest Owners Society). Acta Silvae Ligni 113 113, 1–13. doi:10.20315/ASetL.113.1

Pezdevšek Malovrh, Š., Leban, V., Krč, J., Zadnik Stirn, L., 2012. Slovenia: Country report. Ljubljana, Slovenia.

Pezdevšek Malovrh, Š., Nonić, D., Glavonjić, P., Nedeljković, J., Avdibegović, M., Krč, J., 2015. Private Forest Owner Typologies in Slovenia and Serbia: Targeting Private Forest Owner Groups for Policy Implementation. Small-scale For. 14, 423–440. doi:10.1007/s11842-015-9296-8

Pikner, T., 2008. Reorganizing Cross-Border Governance Capacity: The Case of the Helsinki--Tallinn Euregio. Eur. Urban Reg. Stud. 15, 211–227. doi:10.1177/0969776408090414

Pisano, U., Lange, L., Berger, G., 2015. ESDN Quarterly Report N°36: Social Innovation in Europe - An Overview of the Concept of Social Innovation in the Context of European Initiatives and Practices. Vienna, Austria.

Podmenik, D., Adam, F., Milosevic, G., 2017. The Challenges of Social Entrepreneurship in Slovenia, in: Social Enterprises in Eastern and Southeastern Europe. 6th EMES International Research Conference on Social Enterprise, Louvain-la-Neuve, Belgium, p. 11.

Poje, A., Pezdevšek Malovrh, Š., Krč, J., 2016. Factors Affecting Harvesting Intensity in Small-Scale Private Forests in Slovenia. Small-scale For. 15, 73–91. doi:10.1007/s11842-015-9309-7

Polman, N., Slee, B., Kluvánková, T., Dijkshoorn, M., Nijnik, M., Gezik, V., Soma, K., 2017. Report D2.1 Classification of Social Innovations for Marginalized Rural Areas Authors:

Prah, J., 2009. Project TCP/SVN/2901 Annex 9 - 7b Final Report: Charcoal Use and Trade in Slovenia. Ljubljana, Slovenia.

Prah, J., 2004. Primeri dobrih praks: Oglarska pot, in: Turistične Gozdne Poti in Varstvo Narave. Radovna, pp. 1–6.

Rametsteiner, E., Weiss, G., 2006. Innovation and Innovation Policy in Forestry: Linking Innovation Process with Systems Models. For. Policy Econ. 8, 691–703. doi:10.1016/j.forpol.2005.06.009

Rana, N.P., Weerakkody, V., Dwivedi, Y.K., Piercy, N.C., 2014. Profiling Existing Research on Social Innovation in the Public Sector. Inf. Syst. Manag. 31, 259–273. doi:10.1080/10580530.2014.923271

Rao-Nicholson, R., Vorley, T., Khan, Z., 2017. Social innovation in emerging economies: A national systems of innovation based approach. Technol. Forecast. Soc. Change 121, 228–237. doi:10.1016/j.techfore.2017.03.013

Rhodes, R.A.W., 1998. Understanding Govenance: Policy Networks, Governance, Reflexivity and Accountability. Public Adm. 76, 408–409. doi:10.1111/1467-9299.00107

Rhodes, R.A.W., 1996. The New Governance - Governing Without Government. Polit. Stud. 44, 652–667. doi:10.1111/j.1467-9248.1996.tb01747.x

Ridley-Duff, R., 2008. Social enterprise as a socially rational business. Int. J. Entrep. Behav. Res. 14, 291–312. doi:10.1108/13552550810897669

Rodima-Taylor, D., 2012. Social innovation and climate adaptation: Local collective action in diversifying Tanzania. Appl. Geogr. 33, 128–134. doi:10.1016/j.apgeog.2011.10.005

Rogelja, T., Ludvig, A., Weiss, G., Secco, L., 2018a. Implications of policy framework conditions for the development of forestry-based social innovation initiatives in Slovenia. For. Policy Econ. 95, 147–155. doi:10.1016/j.forpol.2018.07.011

Rogelja, T., Ludvig, A., Weiss, G., Secco, L., 2018b. Implications of policy framework conditions for the development of forestry-based social innovation initiatives in Slovenia. For. Policy Econ. 95, 147–155. doi:10.1016/j.forpol.2018.07.011

Rogelja, T., Shannon, M.A., 2017. Structural power in Serbian anti-corruption forest policy network. For. Policy Econ. 82, 52–60. doi:10.1016/j.forpol.2017.05.008

Sabato, S., Vanhercke, B., Verschraegen, G., 2017. Connecting Entrepreneurship with Policy Experimentation? The EU framework for Social Innovation. Innov. Eur. J. Soc. Sci. Res. 30, 147–167. doi:10.1080/13511610.2017.1282308

Sarkki;, Taras, P., Melnykovych, M., Zahvoyska, L., Derbal, J., Voloshyna, N., Nijnik, M., 2019. Beyond participation! Social innovations facilitating movement from authoritative state to participatory forest governance in Ukraine. Landsc. Ecol. 34, 1601–1618. doi:10.1007/s10980-019-00787-x

Sarkki, S., Ficko, A., Miller, D., Barlagne, C., Melnykovych, M., Jokinen, M., Soloviy, I., Nijnik, M., 2019. Human values as catalysts and consequences of social innovations. For. Policy Econ. 104, 33–44. doi:10.1016/j.forpol.2019.03.006

Sciarelli, F., Rinaldi, A., 2016. Public Actors, in: Sciarelli, F., Rinaldi, A. (Eds.), Development Management of Transforming Economies - Theories, Approaches and Models for Overall Development. Palgrave Macmillan, London, UK, pp. 103–138. doi:10.1057/978-1-137-59911-7

Scott, J.C., 1998. Seeing Like a State:, How Certain Schemes to Improve the Human Condition Have Failed,Yale University Press, 1998. doi:10.1093/biomet/85.2.427

Secco, L., Da Re, R., Pettenella, D.M., Gatto, P., 2014. Why and how to measure forest governance at local level: A set of indicators. For. Policy Econ. 49, 57–71. doi:10.1016/j.forpol.2013.07.006

Secco, L., Favero, M., Masiero, M., Pettenella, D.M., 2017a. Failures of political decentralization in promoting network governance in the forest sector: Observations from Italy. Land use policy 62, 79–100. doi:10.1016/j.landusepol.2016.11.013

Secco, L., Pisani, E., Burlando, C., Da Re, R., Gatto, P., Pettenella, D., Vassilopoulus, A., Akinsete, E., Koundouri, P., Lopolito, A., Prosperi, M., Tuomasiukka, D., Den Herde, M., Lovric, M., Polman, N., Dijkshoorn, M., Soma, K., Ludvig, A., Weiss, G., Zivojinovic, I., Sarkki, S., Ravazzoli, E., Dalla Torre, C., Streifeneder, T., Slee, B., Nijnik, M., Miller, D., Barlagne, C., Prokofieva, I., 2017b. Demonstrator D4.2 Set of Methods to Assess SI Implications at Different Levels: Instructions for WPs 5&6.

Secco, L., Pisani, E., Da Re, R., Rogelja, T., Burlando, C., Vicentini, K., Pettenella, D., Masiero, M., Miller, D., Nijnjk, M., 2019. Towards a method of evaluating social innovation in forest-dependent rural communities: First suggestions from a science-stakeholder collaboration. For. Policy Econ. 104, 9–22. doi:10.1016/j.forpol.2019.03.011

Sergent, A., Arts, B., Edwards, P., 2018. Governance arrangements in the European forest sector: Shifts towards 'new governance' or maintenance of state authority? Land use policy 79, 968–976. doi:10.1016/j.landusepol.2016.08.036

Sevnik, F., 1936. Oglarstvo v Sloveniji (Carbonisation du Bois en Slovenie). Šumarski List (Revue For. 60, 281–320.

Sewell, W., 1992. A Theory of Structure: Duality, Agency, and Transformation. Am. J. Sociol. 98, 1–29.

Shannon, M.A., 1989. Managing public resources: Public deliberation as organizational learning. PhD Disertation. doi:10.16953/deusbed.74839

Slapnik, T., 2016. Project P9: Support to the Development of Social Enterprenaurship, Co-Operatives and Democratic Economy.

Slee, B., 2019. An inductive classification of types of social innovation. Scottish Aff. 28, 152–176. doi:10.3366/scot.2019.0275

Slee, B., Clotteau, M., Lukesch, R., Weiss, G., Ludvig, A., 2018. HOW CAN SOCIAL INNOVATION SUPPORT " THE FUTURE OF FOOD AND FARMING " ? POLICY Br.

SloHraSocionet, 2015. State and Characteristics of Social Entrepreneurship in the South East Region. Ljubljana.

Sørensen, E., Torfing, J., 2014. Collaborative Innovation and Governance Capacity, in: Lodge, M., Wegrich, K. (Eds.), The Problem-Solving Capacity of the Modern State: Governance Challenges and Administrative Capacities Chapter Abstracts. Oxford University Press, New York, pp. 238–257. doi:10.1017/CBO9781107415324.004

Sørensen, E., Torfing, J., 2013. Enhancing Social Innovation by Rethinking Collaboration, Leadership and Public Governance, in: Social Frontiers: The next Edge of Social Innovation Research. NESTA, London, United Kingdom., pp. 1–12.

Spekkink, W., 2013. Institutional capacity building for industrial symbiosis in the Canal Zone of Zeeland in the Netherlands: A process analysis. J. Clean. Prod. 52, 342–355. doi:10.1016/j.jclepro.2013.02.025

Steinerowski, A.A., Steinerowska-Streb, I., 2012. Can social enterprise contribute to creating sustainable rural communities? Using the lens of structuration theory to analyse the emergence of rural social enterprise. Local Econ. 27, 167–182.

doi:10.1177/0269094211429650

Stern, T., Ranacher, L., Mair, C., Berghäll, S., Lähtinen, K., Forsblom, M., Toppinen, A., 2018. Perceptions on the Importance of Forest Sector Innovations: Biofuels, Biomaterials, or Niche Products? Forests 9, 255–268. doi:10.3390/f9050255

Stevanov, M., Krott, M., 2013. Measuring the success of state forest institutions through the example of Serbia and Croatia. Int. For. Rev. 15, 368–386. doi:10.1505/146554813807700146

Stoop, I., Harrison, E., 2012. Classification of Surveys, in: Handbook of Survey Methodology for the Social Sciences. Springer Science+Business Media, New York, pp. 7–21. doi:10.1007/978-1-4614-3876-2

Straus, S., Welch, V., Kastner, M., Tricco, A., 2013. Methods for completing knowledge syntheses of complex interventions.

Šulek, R., Hrib, M., Šodková, M., 2016. Legal Aspects of European Forest Sustainable Development, in: Šulek, R., Hrib, M., Šodková, M. (Eds.), 17 Th International Ernational Symposium. Department of Forestry and Wood Economics, Faculty of Forestry and Wood Department of Forestry and Wood Economics, Faculty of Forestry and Wood Sciences, Czech University of Life Sciences, Prague, Czech Republic.

Swyngedouw, E., 2005. Governance innovation and the citizen: The Janus face of governance-beyond-the-state. Urban Stud. 42, 1991–2006. doi:10.1080/00420980500279869

Szijarto, B., Milley, P., Svensson, K., Cousins, B.J., 2018. On the Evaluation of Social Innovations and Social Enterprises: Recognizing and Integrating Two Solitudes in the Empirical Knowledge Base. Eval. Program Plann. 66, 20–32. doi:10.1016/j.evalprogplan.2017.08.010

The Young Foundation, 2012. Social Innovation Overview: A deliverable of the project: "The theoretical, empirical and policy foundations for building social innovation in Europe" (TEPSIE), Social Innovation Overview. European Commission – 7th Framework Programme, Brussels, Belgium.

Tukamushaba, E.K., Orobia, L., George, B.P., 2011. Development of a conceptual model to understand international social entrepreneurship and its application in the Ugandan context. J. Int. Entrep. 9, 282–298. doi:10.1007/s10843-011-0079-9

Turner, R.H., 1990. Role change. Annu. Rev. Sociol. 16, 87–110. doi:10.1146/annurev.so.16.080190.000511

van den Dool, L., van Hulst, M., Schaap, L., 2010. More than a Friendly Visit: A New Strategy for Improving Local Governing Capacity. LOCAL Gov. Stud. 36, 551–568. doi:10.1080/03003930.2010.494111

Van Der Have, R.P., Rubalcaba, L., 2016. Social innovation research: An emerging area of innovation studies? Res. Policy 45, 1923–1935. doi:10.1016/j.respol.2016.06.010

Vedung, E., 1998. Policy Instruments: Typologies and Theories, in: Bemelmans-Videc, M.-L., Rist, R.C.., Vedung, E. (Eds.), Carrots, Sticks, and Sermons: Policy Instruments and Their Evaluation. Transaction Publishers, New Brunswick and New Jersey, pp. 21–59.

Vickers, I., Lyon, F., 2014. Beyond green niches? Growth strategies of environmentally-motivated social enterprises. Int. Small Bus. J. 32, 449–470. doi:10.1177/0266242612457700

Wegrich, K., 2014. Regulatory capacity, in: Lodge, M., Wegrich, K. (Eds.), The Problem-

Solving Capacity of the Modern State: Governance Challenges and Administrative Capacities. Oxford University Press, pp. 63–86.

Wegrich, K., Stimac, V., 2014. Coordination Capacity 0, 1–26. doi:10.1109/TIT.2010.2054651

Weiland, S., 2010. Sustainability Transitions in Transition Countries: Forest Policy Reforms in South-eastern Europe. Environ. Policy Gov. 20, 397–407. doi:10.1002/eet.558

Weiss, G., 2013a. Innovation in Forestry: New Values and Challenges for Traditional Sector, in: Carayannis, E.G. (Ed.), Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship. Springer New York, New York, NY, pp. 964–971. doi:10.1007/978-1-4614-3858-8_441

Weiss, G., 2013b. Innovation in Forestry: New Values and Challenges for Traditional Sector, in: Carayannis, E.G. (Ed.), Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship. Springer, New York, pp. 964–971.

Weiss, G., Ludvig, A., Zivojinovic, I., Asamer-Handler, M., Huber, P., 2017a. Non-timber innovations: How to innovate in side-activities of forestry – Case study Styria, Austria. Austrian J. For. Sci. 134, 231–250.

Weiss, G., Pettenella, D., Ollonqvist, P., Slee, B., 2011b. Innovation in Forestry: Territorial and Value Chain Relationships. CABI.

Weiss, Gerhard;, Ollonqvist, P., Slee, B., 2011a. How to Support Innovation in the Forest Sector: Summary and Conclusions, in: Weiss, G.;, Pettenella,D.; Ollonqvist, P.., Slee, B. (Eds.), Innovation in Forestry: Territorial and Value Chain Relationships. CAB International, Oxfordshire, pp. 303–320.

Weiss, Gerhard, Pelli, Päivi, Orazio, Christophe, Tykka, S., Zivojinovic, Ivana, Ludvig, Alice, Weiss, G, Pelli, P, Orazio, C, Tykka, ; S, Zivojinovic, I, Ludvig, A, 2017b. Forest industry clusters as innovation systems: analysing innovation support frameworks in ve European regions Die Analyse von Forst-Clustern aus Innovationssystem-Perspektive: Wie unterschiedliche Rahmenbedingungen in fünf europäischen Regionen Innovatio.

Whitehead, T.L., 2005. Basic Classical Ethnographic Research Methods: Secondary Data Analysis, Fieldwork, Observation/Participant Observation, and Informal and Semi-structured Interviewing, ETHNOGRAPHICALLY INFORMED COMMUNITY AND CULTURAL ASSESSMENT RESEARCH SYSTEMS (EICCARS) WORKING PAPER SERIES. Maryland.

Wilkinson, C., 2014. Country Report: Slovenia A Map of Social Enterprises and Their Eco-Systems in Europe. London, UK.

Winkel, G. (Eds. ., 2017. What Science Can Tell Us 8: Towards a sustainable European forest-based bioeconomy – assessment and the way forward. European Forest Institute, Joensuu, Finland.

Wittmayer, J.M., Avelino, F., van Steenbergen, F., Loorbach, D., 2017a. Actor roles in transition: Insights from sociological perspectives. Environ. Innov. Soc. Transitions 24, 45–56. doi:10.1016/j.eist.2016.10.003

Wittmayer, J.M., Avelino, F., van Steenbergen, F., Loorbach, D., 2017b. Actor roles in transition: Insights from sociological perspectives. Environ. Innov. Soc. Transitions 24, 45–56. doi:10.1016/j.eist.2016.10.003

Wu, X., Howlett, M., Ramesh, M., 2018. Policy Capacity: Conceptual Framework and Essential Components, Policy Capacity and Governance. doi:10.1007/978-3-319-54675-

Yin, R.K., 2009. Case Study Research Design and Methods, 4th ed. Sage Publications Inc.

Yin, R.K., 1984. Case study research : design and methods. Sage Publications.

Zavod za Gozdove Slovenije, 2017. Lastništvo gozdov [WWW Document]. URL http://www.zgs.si/slo/gozdovi_slovenije/o_gozdovih_slovenije/lastnistvo_gozdov/index.html (accessed 3.12.18).

Zavod za Gozdove Slovenije, ;, Območna Enota Brežice, ;, 2017. Gozdnogospodarski načrt gozdnogospodarske enote Dole 2017 - 2026, Štev. 08-07/17. Brežice, Slovenia.

Živojinović, I.., Weiss, G.., Lidestav, G., Feliciano, D., Hujala, T., Dobšinská, Z., Lawrence, A., Nybakk, E., Quiroga, S., Schraml, U., 2015. Forest Land Ownership Change in Europe. Vienna, Austria.

Živojinović, I., Nedeljković, J., Stojanovski, V., Japelj, A., Nonić, D., Weiss, G., Ludvig, A., 2017. Non-Timber Forest Products in Transition Economies: Innovation Cases in Selected SEE Countries. For. Policy Econ. 81, 18–29. doi:10.1016/j.forpol.2017.04.003

VIII. Annexes

8.1 Section II

Annex A Identified governance sub-capacities (2nd order constructs)

No	Authors	Identified governance sub-capacities
1	(Arts and Goverde, 2006)	"Indicative governance capacity: the potentials of the (new) modes of governance to contribute to the solution of societal or administrative problems. which are legitimately recognized by stakeholders." p.75
		"Performative governance capacity: the performance of the (new) modes of governance in those practices that are meant to solve these societal or administrative problems.'" p.76
2	(Barbaroux, 2012)	"integrative capabilities "facilitate the translation of basic research into commercial applications through the movement of scientists and their enhanced labor market mobility" (Swan et al., 2007, p. 531)" p.235
		"relational capabilities "facilitate innovation by (...) supporting collaborative product development projects" (Swan et al., 2007, p. 531)." p.235
3	(Christensen et al., 2016)	"Coordination capacity is about bringing together disparate organizations to engage in joint action.
		Analytical capacity is about analyzing information and providing advice as well as risk and vulnerability assessments;
		Regulation capacity is about control, surveillance, oversight, and auditing
		Delivery capacity is about handling the crisis, exercising power, and providing public services in practice." p.888
5	(Dang et al., 2016)	Potential institutional capacity - "an arrangement is organized and structured in such a way that it enables societal actors to work together in order to solve collective problems." p.1158
		"Performative governance capacity concerns the actual performance of a policy arrangement in achieving collective goals." p. 1158
6	(Dewulf and Termeer, 2015)	Reflexivity "When there is no agreement on what the problem exactly is because of conflicting frames, it is essential to deal with this variety of possible perspectives on wicked problems and to prevent both tunnel vision and intractable controversies." p. 761
		resilience "refers to the capability of the governance system to ensure that the social-ecological system is able adapt to unpredictable, changing circumstances without losing its identity and reliability." p.761

		Responsiveness - governance capability needed "to respond wisely to continuously changing demands." p.761
		revitalization "refers to the capability of actors in a governance system to recognize and unblock counterproductive patterns in policy processes, and thus to reanimate actors and to enhance processes of innovation needed to cope with wicked problems." p.761
		"rescaling which is the capability to observe and address cross-scale and cross-level issues.) p.761
8	(Gissendanner, 2004)	Strategic capacity reflects on the ability of a city to act in a planned, coordinated, and rational manner." p.45
9	(González and Healey, 2005)	"Innovative governance capacity is, therefore, the ability of the institutional relations to work collectively towards the creation of better and fairer quality living environments." p.2056
11	(Hughes et al., 2017)	"Policy capacity -: the ability to make intelligent collective decisions (Painter & Pierre, 2005); the ability to assemble necessary resources (Painter & Pierre, 2005); the ability to produce robust, evidence-based policy by applying analytic methodologies (Howlett, 2009; Oliphant & Howlett, 2010; Scott & Baehler, 2010; Wellstead, Stedman, & Howlett, 2011); the ability to ''weave'' together different organisations and interests (Parsons, 2004) and coordinate policy making across and external to government (Aucoin & Bakvis, 2005; Davis, 2000; Janicke, 1997; Peters, 1996); and the ability to implement as well as formulate policy (Davis, 2000)." p.230
		Managerial capacity at the individual level "is interpreted as the ability to perform the key managerial functions of planning, human resources management, budgeting and directing." p. 230
		"Administrative capacity at the organisational level included the availability of funding and staffing levels within which managers work as well as the nature of intra- and inter-agency communication, consultation and coordination (Wu et al., 2015)." p.230
16	(Mees and Driessen, 2011)	"legal capacity as those formal regulations and policy principles which urban planning has at its disposal to steer adaptation planning by means of green space, both in the protection of existing green space and in the creation of new such space." p.254
		"Regarding managerial capacity, we have looked at the extent of integration of adaptation into urban planning, the extent of collaboration with other policy sectors, and the use of integrative management tools as a means for effective governance of adaptation." p.255
		"We have broken political capacity down into the three critical aspects of accountability, political will, and leadership." p.255

			"First, we add resource capacity, since this is regarded as a critical factor in the literature on adaptive capacity and green planning in urban areas. Resource capacity contains critical aspects in the form of economic, human, and knowledge resources." p.256
			Learning capacity "appears to be quite crucial in the literature on adaptive capacity, since learning is regarded as essential for the ability of social-ecological systems to cope with change and adjust accordingly." p.257
18	(Pikner, 2008)		"The institutional capacity is a 'public good' and involves three types of connected resources or 'capitals' in the interactive governance context: knowledge resources, trust and social understanding and the (political) capacity to act collectively."pp.212-213

Annex B1 Themes derived from 1st order constructs

Context

Although authors of all studies acknowledge that context in which they analyzed governance capacity is important, only three authors operationalized it through elements. That is how Horigue et al. (2016) used to size and geographical attributes for describing Batangas Marine Protected Areas. Furthermore, they assessed the effects of size and area, as well as socioeconomic and political contexts on participation and governance capacity. Johnson (2010) discusses the influence of cross-scale dynamics on the sustainability of Junagadh fisheries from a social-ecological system perspective, concluding that "…the social-economic drivers of change in the fishery are disconnected from the need for ecosystem resilience" (p 275). Marot (2010) considers the need for new jobs in the field of planning yet acknowledging that "The calculation does not show a link between the type of administration/the current number of employees and the need for jobs as new employees are needed in municipalities with a unified/divided administration and with smaller/larger staff" (pp140-141). All other authors described the context of the cases through narrative and some quantitative data, mostly on the scale and available resources. As our aim in this step of literature analysis was to identify key elements of governance capacity, comparison of highly diversified contexts of the studies did not have sense. Nevertheless, we take into consideration the importance of context when analyzing literature on SI, as in that step we are focusing mostly on natural resource management.

Democracy and governance principles

Authors of 6 studies referred to democratic or governance principles while addressing governance sub-capacities. For example, Christensen et al. (2016) looked into legitimacy as a characterization of as the relationship between government authorities and citizens. They distinguished among input, output, and throughput legitimacy. Mees and Driessen (2011, p.255). see accountability as "a key requirement of any governance arrangement" when looking into policy capacity of public administration. Arts and Goverde (2006) also recognize accountability as a key value of democratic society, as they build their reflexive approach on Nelisen (2002) Judicial-Political-Economic (JEP) triangle. Hughes et al. (2017) refer to the rule of law and existing legal administrative system that needs to be accountable to citizens. Nelles (2013) refers to executive and institutional autonomy while analyzing institutional context for city/region governance partnerships. Furthermore, she claims that "The greater the

power and autonomy of executive actors, the greater the freedom for political entrepreneurship and potential for cooperation (greater autonomy can also block cooperative efforts)" and "The more access to financing and autonomy over local policy, the more likely local actors will be willing to sacrifice resources and/or decision-making authority to partnerships" (Nelles, 2013, p. 1358). Van den Dool et al. (2010) discussed legitimacy and democracy, arriving at the conclusion that local governance capacity must balance between effectiveness and legitimacy. They argue that services should be provided efficiently, while local governments should enable the expression of local identities. "Local democracy is crucial for arriving at decisions that are felt to be legitimate" (van den Dool et al., 2010, p. 557).

Congruence

Arts and Goverde (2006), as well as Knill & Lehmkuhl (2002), addressed congruence in their work on governance capacity. Arts and Goverde (2006) used congruence to assess to what extent the dimensions of policy arrangement contradict each other. Referring to indicative governance capacity, they follow (Boonstra, 2004) in distinguishing between three types of congruence (structural-internal, structural-external and strategic). While strategic congruence refers to extent of shared policy discourses among policy actors, structural-internal congruence refers to the coherence of various dimensions of policy arrangements and structural-external refers to the embeddedness of policy arrangement into wider institutional context. Knill and Lehmkuhl (2002) look just into structural-external congruence. They argue that governance capacity increases "with the degree of congruence between the scope of the underlying problem and the existing regulatory structures" (Knill and Lehmkuhl, 2002, p. 47).

Discourses and practices

Five studies posed that context influences other elements such are discourses, and practices. For example, Dang et al. (2015) and Gonzalez and Healey (2005) refer to discourses as part of transformative processes in governance. Following Arts and Goverde (2006) policy Arrangement Approach, Dang et al. (2015) analyzed Vietnam's forestry reforms in the case of Tay Ninh province. They used *Converging discourses* as an element of governance capacity, as "Converging discourses support cooperation through the objectives and strategies that the involved actors jointly consider appropriate" (Dang et al., 2015, p. 1160). For assessing *Converging discourses,* they refer to *Venues* and *Open Attitudes* as criterions of *Institutional capacity*, and to *Social learning* as a criterion of *Governance performance*. Their conclusion states that the pattern of "learning-practicing-mobilization" shapes governance performance,

while impacts of the wider socio-economic context on actors' cooperation are exerted through discourses. Gonzalez and Healey (2005) also look into discourses and practices of actors in a struggle for innovative transformative actions within the urban setting of the city of Newcastle. As they claim "the search for socially innovative movements in governance processes should focus on how action is mobilized to open up institutional opportunities and expand the space for innovative actions and how far this lets in new actors and generates new, more socially focused, governance discourses and practices" (González and Healey, 2005, p. 2062). When analyzing discourses, they look into framing issues, problems, solutions, and interest, whereas within practices they analyzed routines and repertoires for acting.

Institutions

Eleven of nineteen studies focused on institutions in analyzing governance capacity. Following institutionalist approaches, those authors analyze formal and informal rules and laws, and how those institutions influence governance capacity. In their example of organic farming in the Netherlands, Arts and Goverde (2006) find that mainstream policies and regulations constrain governance capacity for organic farming. They call it "the organic farming policy paradox" as mainstream agricultural policies constrained organic farming sector while organic policies favored mainstream farming practices. Dang et al. (2015) followed the approach of Arts and Goverde (2006) and assessed institutional capacity through rules of the game, more particularly by looking in codification and practicing of the forest property rights in Vietnam. Similarly to Arts and Goverde (2006), they found that limited property rights were granted to villagers involved in forest policy-making. Furthermore, they discovered that property rights were enforced weakly due to inadequate regulations and lack of enforcement mechanisms. One of their conclusions was that extent to which rules enable participation of actors in decision making the affected emergence of collective goals, what shaped their commitment to making resources available (Dang et al., 2016, p. 1166). Likewise, Johnson (2010, p. 272) found that "Contracts among the businesses, households, and individuals involved are supported by informal law in the sense of commonly agreed-upon rules that govern how parties to contracts fulfil their obligations." He claims that governance is effective when institutions can adapt to the demands of the fishery and that knowledge about socio-ecological system, cultural and economic context is a necessary precondition. In the end, he concludes that "institutions can heighten the path dependency of human-ecological systems with the long-term threat of undesirable system flips" (Johnson, 2010, p. 275). Applying sociological institutionalism, Gonzalez and Healey (2005) analyze innovation in governance capacity looking into the

changing governance dynamics embedded in institutional settings. They refer to institutions in three analytical levels of governance. On the level of 'specific episodes', they analyze the interaction of actors situated in the specific institutional arena, particularly considering the newly established charitable trust which found a place on the Newcastle City Council. On the level of governance, processes they focus on mobilization of action for opening institutional opportunities and expanding the space for innovative actions, governing practices, and discourses. On the third level, Gonzalez and Healey (2005, p.2062) look into governance cultures, specifically in "the cultural embedding of institutional practices in specific places". Nelles (2013) synthesized a rational choice and regional governance perspectives into a category of institutions and opportunities. She considers institutions as relatively stable factors over time, while opportunities are "episodic and difficult to predict". argue that institutions "determine access to resources, competencies, potential partners and formal networks, and can determine the strategic position of local authorities relative to one another" (Nelles, 2013, p. 1357). Nevertheless, she concludes that institutions and opportunities are poor predictors of governance capacity and cooperation if used alone.

Values and Cultures

Six studies touched upon a group of elements that we recognized as cultures and traditions. Hughes et al. (2017) recognized leadership as a crucial element of governance capacity. They acknowledge that although leadership is an individual attribute, it is dependent "on a broader culture which develops and recognizes such leadership" (Hughes et al., 2017, p. 242). Christensen et al. (2016) discussed organizational legitimacy as a central element of governance capacity. He posits that organizational legitimacy refers to "the degree of cultural support for an organization", an organization needs not only to be perceived as efficient but also has to conform "to institutional myths" (Christensen et al., 2016, p. 888). González and Healey (2005) referred to governance cultures as to the third analytical level of governance capacity. They operationalized governance cultures using 3 dimensions: the range of accepted modes of governance, the range of embedded cultural values, and formal and informal structures for policing discourses and practices. The argument is based on the idea that to understand how particular modes of governance change, one must understand the cultural embedding of institutional practices. They noticed that the values of non-traditional actors were crucial for initiating change in urban planning in Newcastle, England. In addition, they state that "people learn the discourses, practices, and values embedded in established governance processes. They may also seek to challenge and change them"(González and Healey, 2005, p.

2061). In the end, they hypothesize non-traditional actors "are likely to have the greatest potential to expand and accumulate the power to transform established governance discourses and practices where they have resonance with shifts in the dynamics of underlying governance cultures" (González and Healey, 2005, p. 2067). Nevertheless, they conclude that it is more likely that innovative cultures are going to be embedded in the mainstream governance processes rather than to transform them. Dang et al. (2015) looked into strategic interactions of actors and converging discourses. They refer to open attitudes as a criterion for assessing institutional capacity, as they claim that open attitudes towards other positions are crucial for actors' willingness to adjusts goals and strategies. In addition, they perceive open attitudes as a fostering factor to social learning. They conclude that Forest Management Boards' open attitudes facilitated social learning resulting in the new models of forest plantations. Nevertheless, they acknowledge that that relationship between open attitudes and social learning is not straightforward. Using different terminology but referring to the same phenomena, Čolić (2014) considered the understanding of others and understanding of different roles and responsibilities as a precondition for social learning. Johnson (2010) took the perspective of interactive governance, where negotiation of ethical systems, values, and principles is critical for the underpinning of institutional arrangements. He concludes that "Central to governance capacity in fisheries is institutional adaptability, the ability of humans to modify their organizations and reflect on the rules and values that guide them in response to change" (Johnson, 2010, p. 264).

Knowledge and learning

Six studies that referred to traditions and values recognized that knowledge and learning are essential elements of governance capacity. Most of those studies are addressing knowledge and learning as learning capacity. Barbaroux (2012) discussed the importance of knowledge management capability in the ARPANET project. He perceived this capability as an ability to codify, capitalize and disseminate knowledge outcomes in the development of the first internet. He made a link between knowledge management capability and increased use of the internet. Following the institutionalist approach of Healey (2006), Čolić (2014) used categories of individual knowledge, collective learning capacities as well as bundling of knowledge from different sources. In the municipal planning case, she finds out that knowledge and learning "affect the creation of a new environment where the actors cooperate in a way in order to solve problems, prevent conflicts and act more effectively" (Čolić, 2014, p. 46). Dang et al. (2015) use social learning as an indicator of governance performance, as through learning actors make

small adjustments needed for achieving common goals. Similarly, Johnson (2010) concludes that social learning strongly influences governance capacity by reshaping the institutions for adaptive co-management. He concluded "Institutions that have effective systems for learning and self reflection are more likely to be adaptive" (Johnson, 2010, p. 275). Dool et al. (2010) analyzed the Comprehensive Performance Assessment (CPA) of local governments in the UK and the Netherlands. They observed that when CPA stopped stimulating learning, it become the burden to local governments, which decreased their performance. Their conclusion was "that local governing capacity assessments help to learn processes if various factors are considered: repetition, sense of urgency, a safe learning environment and a trusted messenger" (Dool et al., 2010, p. 564). Mees and Driessen (2011) discussed learning capacity in the context of adaptation to climate change. They operationalize it through two aspects: "dealing with uncertainty" and "continuous learning processes" (Mees and Driessen, 2011, p. 257). Their hypothesis was that learning capacity increases with the high extent of infrastructure, exchange of experiences, and utilization of stakeholders' dialogue. They conclude that increase in learning capacity (amongst others) would improve governance capacity for adaptation to climate change.

Resources

Nine studies addressed resources, either directly or indirectly. While some authors address knowledge through the learning process (i.e. Čolić, 2014), others (Barbaroux, 2012; Nelles, 2013; Pikner, 2008) understand knowledge as a resource. Latter authors thus mostly referee civil capital, human capital or knowledge resources, including skills and competencies. Some authors (Dang et al., 2015; Gissendanner, 2004; Gonzalez and Healey, 2005) also considered infrastructural resources, talking about hard and soft infrastructure, venues or arenas. Dang et al. (2015) used an element 'facilitating resources', analyzing resource availability as criteria for institutional capacity. Dool et al. (2010) took into consideration time and money. (Mees and Driessen, 2011) considered several types of resources saying "Resource capacity contains critical aspects in the form of economic, human, and knowledge resources. It is obvious that sufficient resources are needed for dealing with adaptation, just like any other governance issue".

Structures and networks

Seven studies recognized the importance of adequate structures and networks for governance capacity. For example, Hughes et al. (2017) used nodal governance model to analyze political

and organizational structures as elements of governance capacity. They started from the idea that "the structures of governance comprise nodes (institutions, stakeholders, constituencies) which can be characterized in terms of ideologies, norms, technologies, resources" (Hughes et al., 2017, p. 232). Their findings indicated that regardless to a number of organizational structures in place that were "vital for strengthening policy capacity and improving policy processes in health authorities", "increased administration through added communication and authorization layers, expanded timelines, and inadequate practices when not managed properly inhibited rather than improved policy capacity" (Hughes et al., 2017, p. 241). Barbaroux (2012) described the establishment of formal and informal linkages for grasping resources within organizational capacity in the creation of ARPANET (the first worldwide web). His findings were more positive, as he concluded that organizational network structure (among other elements) positively influenced governance capacity for innovation. Horigue et al. (2016) analyzed the organizational structure, governance structure and network size in the marine protected areas. They found out that the size of the network did not influence governance capacity, whereas organizational and governance structures did. Gonzalez and Healey (2005, p. 2066) showed how "a network of actors coming from non-traditional areas can make a substantial contribution towards the development of innovative governance capacity by challenging existing political boundaries and contributing to a new language and discursive practices". In relation to crisis management, Christensen et al. (2016) illustrated how networks had helped to mediate inter-departmental conflicts or interests cutting across policy areas, thus increasing governance capacity.

Actors

Although all studies implicitly referred to actors (individuals or organizations), only four studies explicitly addressed them as a crucial aspect of governance capacity. Studies indirectly addressed actors trough discourses, networks, or institutions, whilst studies explicitly addressing actors focused on the selection of actors, roles, interests, etc. For example, to assess local governance capacity in the UK and the Netherlands, Dool, Hulst, and Schaap (2010) identified different roles of local governments. Similarly, Nelles (2013) looked into the number and type of actors in her analysis of the governance capacity of city-regions. Following institutionalist approach, González and Healey (2005) looked into position, roles, strategies, and interests of key players. They found out that besides traditional actors, non-traditional actors contributed to increased innovative governance capacity. Gissendanner (2004) assessed strategic governance capacity by analyzing coalitions of organizations that control resources

and use them for a common cause.

Leadership

In five studies, the authors recognized leadership as a crucial element of governance capacity, although they were referring to different sub-capacities. Gissendanner (2004, p.51) came to conclusion that "if mayors or other leaders influence strategic capacity at all, they do so through the accumulation of resources and their skillful application in the four basic processes of agenda-setting and policy initiation, policy implementation, coalition maintenance, and external representation". In a similar manner, Lafortune and Collin (2011, p.411) found out that leadership is "important for stimulating the cooperation between the actors of the region and for facilitating consensus building". Čolić (2014) analyzed the influence of individual initiative skills on participation, thus implicitly referring to leadership. Lydeke, Mees, and Driessen (2011) and Horigue et al. (2016) found out that among other factors strong leadership enchased governance capacity.

Coordination

Coordination is considered as important for governance capacity by 6 studies. Although those authors referred to different sub-capacities (i.e Hughes et al. (2017) refers to policy capacity, Barbaroux (2012) to adaptive governance capacity), the main idea is that coordination influence governance capacity. For example, Hughes et al. (2015, p.233) noticed that poor coordination "results in confusion about responsibilities, duplication of effort, missed opportunities, delays in the provision of advice, and sometimes decisions that were made contrary to agreed policy directions", thus decreasing policy capacity. In a similar manner Barbaroux (2012) finds that formal and informal coordination was a key element in problem-solving of internet development, that highly increased innovative governance capacity of firms involved in the ARPANET project.

Planning

Five studies analyzed governance capacity looking into the planning process (González and Healey (2005), Čolić (2014), Knill & Lehmkuhl (2002), Marot (2010), Horigue et.al (2016)). González and Healey (2005) analyzed the micro-dynamics of transformations in the urban planning process and their influence on governance capacity. Horigue et al. (2016) addressed objectives and meetings as an influential factor in forming different types of networks among actors, while Knill and Lehmkuhl (2002) look into the type of the problem and congruence of the type of the problem and regulatory structures. From the other side, Čolić (2014) analyzed

collaborative planning capacity (as a governance sub-capacity), looking into the planning process and available resources. In a similar manner, Marot (2010) mostly addressed various resources available in spatial planning.

Participation

Participation got the attention of seven studies. Arts and Goverde (2006) talk about participation and political primacy as a property of the democratic system, whereas Dool et al. (2010) in the same manner address consensus. Other authors discuss various features of participation processes. This is how González and Healey (2005) talked about stakeholder selection and communicative repertoires. They argued that the participation of non-traditional actors opened spaces for new ideas and deliberative processes. Čolić (2014) addressed participation and its influence on communication, cooperation, and collective action. In a similar manner, Horigue et al. (2016) concluded that participation in Marine Protected Areas was affected by institutional arrangements and by socio-economic and political context. They specified that "…less complicated network objectives and systems for engagement, more inclusive membership, better communication, incentive systems, and strong leadership enhanced participation and governance capacity" (Horigue et al., 2016, p. 71). Lafortune and Collin (2011) started with the hypothesis that metropolitan governance capacity was influenced by incentives, leadership, and collaborative behavior. They concluded that these three factors must be taken together into consideration, as incentives and leadership increased the willingness the of stakeholders to collaborate in the case of social housing. Marot (2010, p.136) considered the frequency of participation with different population groups, the impact of population groups, quality of cooperation with different population groups and evaluation of the level of public participation during municipality planning in Slovenia. She found that frequency of cooperation was less than anticipated and that the quality of participation was neither good nor bad.

Financing and Incentives

Six studies paid special attention to financing. One group of authors consider financing as a financial resource (Horigue et al., 2016; Hughes et al., 2017; Marot, 2010), other looked into financing and support mechanisms, such are incentives (Barbaroux, 2012; Lafortune and Collin, 2011, Horigue et al., 2016). Horigue et al. (2016, p.81) found out that, in case of Marine Protected Areas, "the mutual fund systems worked when members trusted each other, and when members believed that the amount, they were contributing was equitable". They also found out

that the incentives provided by the provincial government (i.e. awards) motivated local governments to participate and perform well, thus increasing their governance capacity. Hughes et al. (2017) concluded that the lack of financial resources for developing and implementing health projects decreased governance and policy capacity in Australia. Barbaroux (2012) mentions the capacity to implement incentive systems that support formal and informal collaborations, but without clear specification on what that incentive systems might be. We concluded that he was referring to appropriate and adaptive organizational design of the network of the involved actors. In a similar manner, Lafortune and Collin (2011) addressed appropriate incentive systems as a crucial element of governance capacity. Under the incentive systems, they considered the role of the upper levels of governance and concluded that it negatively influenced governance capacity, due to the loss of responsibility of regional municipalities (Lafortune and Collin, 2011, p. 411).

Performance

Four studies included the performance of policy arrangements or individual initiatives in their analysis of governance capacity. Dang et al. (2015) addressed governance performance through practicing rights, social learning and effectiveness, and cost-effectiveness. They concluded that high institutional capacity increases governance performance, but they acknowledged that it might not always be the case. As they stated "high-governance performance may not be a simple sum of the various scores on the different criteria", as contextual factors influence the dynamics of governance capacities (Dang et al., 2015, p. 1167). Dool, Hulst, and Schaap (2010) looked into the local level assessment of governance capacity in the Netherlands and the UK. They argue that "Performance is no longer about what gets done, but also about how it gets done, why it gets done and whether this is in accordance with the local society" (Dool et al., 2010, p. 552). They arrived at the conclusion that governance capacity assessment should be broadened to include results of other institutions, not just of the assessed one. They argue "If results are becoming more dependent on arrangements amongst various organizations, including local governments, and the ability of the local government to effectively create and steer such arrangements, the focus of analysis cannot be only on measuring effects" (Dool et al., 2010, pp. 565–566). Christensen et al. (2016) looked into the relationship of governance capacity, and crisis management performance. They found out that "Structures and capacity may constrain and enable performance, but they are not the sole determinant of performance. There is always some leeway for deliberate actions within formal arrangements, and cultural constraints, legitimacy issues, and citizens' expectations must also be taken into

consideration". Although they explained the influence of governance capacity on management performance, they do not extend their research on how management performance influences change of governance capacity over time. Horigue et al. (2016) dealt with the influence on governance context on governance capacity and management performance on Marine Protected Areas networks. They addressed management performance through the effect of context variables on participation, and governance capacity and concluded that analysis of contextual variables in isolation is difficult due the interlinkages among the variables.

Adaptation

Eight studies considered adaptation as a crucial element of governance capacity. One group of studies investigated governance capacity for adaptation to climate change (Dewulf and Termeer, 2015; Mees and Driessen, 2011). Dewulf and Termeer (2015) adopted a governance perspective for looking into climate change adaptation in densely populated river deltas. They argued that five governance capacities are necessary to deal with wicked problems: reflexivity, responsiveness, resilience, revitalization, and rescaling. They concluded robustness trough flexibility significantly contribute to governance capacity. Additionally, they found that rescaling contributed to governance capacity through the matching problem and governance scales, and by bringing long-term concerns into short-term objectives. Another group of authors (Arts and Goverde, 2006; Christensen et al., 2016; Gissendanner, 2004) looked into governance arrangements and arrived at similar conclusions as for the studies dealing with the climate change. For example, Christensen et al. (2016, p. 887) found out that "Flexibility and adaptation are key assets, which are constrained by the political, administrative, and situational context".

Annex B2 Aggregated themes into analytical constructs

No.	Theme	Analytical constructs
1.	Values and Cultures	Institutions, Context (Social)
2.	Context	Context
3.	Congruence	Context (Social)
4.	Democracy and governance principles	Context (Social)
5.	Discourses and practices	Context (Social)
6.	Formal and informal rules	Institutions
7.	Resources	Context (Material), Capacity (Resource)
8.	Financing and Incentives	Context (Material, Social), Capacity (Resource)
9.	Structures and networks	Relational structure
10.	Actors	Agency
11.	Performance	Capacity (Delivery)
12.	Leadership	Agency
13.	Coordination	Capacity (Coordination)
14.	Adaptation	Capacity (Adaptive)
15.	Knowledge and learning	Capacity (Learning)
16.	Planning	Capacity (Analytical, Delivery)
17.	Participation	Capacity (Deliberative)

8.2 Section IV Study 2

Annex C Survey on the roles of public actors in social innovation initiatives

INTRODUCTION

Thank you for deciding to take part in this European wide research based on the European Horizon 2020 project "Social innovation in marginalized rural areas (SIMRA)" (www.simra-h2020.eu).

As social innovation initiatives are based on the participation of civil society, research until now paid little attention to public actor's involvement in social innovation initiatives. But public actors do play important roles in the development of social innovation initiatives, so they can have strong or week, a positive or negative influence on the initiative's development and success. This research aims to analyze in-depth the roles and influences of public actors on specific social innovation initiatives.

The survey will take 10-35 minutes to complete. Your identity will stay anonymous, and statistical results will be presented in an aggregated form. Results of this study will be communicated to you via e-mail.

Research team

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ABOUT YOUR INITIATIVE AND PUBLIC ACTORS

1. What is the name of your initiative in

- your native language?
- English?

2. In what country is your initiative based*?*

3. In which sector is the focus of your initiative?

- Forestry
- Agriculture and food
- Rural development
- Tourism
- Energy
- Nature protection
- Social services
- Public administration
- Other (please add)

4. When you think about the whole development of your initiative (from its beginning to the current day), **in what phase is your initiative now?**

- The preparatory phase includes initial steps of your initiative (i.e. development and spreading of the ideas, mobilization of other actors) necessary to start with activities
- The implementation phase includes implementation activities (i.e. project preparation and implementation)
- Ended

5. A public actor is a person (i.e. regional forester, a local politician, civil servant, etc.) or an organization working in behalf of a governmental body (e.g. state forest service, municipality, public enterprise, etc.). When you think about the whole development of your initiative, **were public actors anyway involved in your initiative at any time?**

- Yes
- No

6. How many public actors are or were involved in your initiative, at any point of its development (from the beginning of an initiative to the current day)?

PUBLIC ACTOR

7. Who is (or was) Public actor 1-5?

INVOLVEMENT OF PUBLIC ACTOR 1-5

8. In what public organization, sector, and level do Public Actor 1-5 belong primarily?

Organization:

- Ministry
- Municipality
- Inspectorate
- Public agency
- Public enterprise
- Public institute
- Public university
- Public school

Sector:

- Forestry
- Agriculture and food
- Rural development
- Tourism
- Energy
- Nature protection
- Social services
- Public administration

Level:

- Individual
- Local
- Regional
- National
- International

If you could not find a suitable Organization or Sector, please, add it here

9. **Involvement** is the act of taking part in the initiative activities. **According to your experience, how often was Public Actor involved in your initiative?**

During the preparatory phase	During the project phase
1 – Never	1 – Never
2 – Rarely (<10% of the activities)	2 – Rarely (<10% of the activities)
3 – Occasionally (approx. 30% of the activities)	3 – Occasionally (approx. 30% of the activities)
4 – Sometimes (approx.50% of the activities)	4 – Sometimes (approx.50% of the activities)
5 – Frequently (approx. 70% of the activities)	5 – Frequently (approx. 70% of the activities)
6 – Usually (approx. 90% of the activities)	6 – Usually (approx. 90% of the activities)
7 – Every time	7 – Every time

10. **Communication** is the act of exchanging of information by speaking, writing, or using some other medium. **According to your experience, how would you describe the quality of communication between Public Actor and your initiative?**

    1 – Poor
    2 – Fair
    3 – Good
    4 – Very good
    5 – Excellent

11. **The importance** is the significance of actors' involvement in the initial development. **According to your experience, what is (or was) the overall importance of Public Actor for your initiative?**

    1 – Not at all important
    2 – Low importance
    3 – Slightly important
    4 – Neutral
    5 – Moderately important
    6 – Very important
    7 – Extremely important

12. **Trust** is believing in the reliability, predictability, goodwill, knowledge, truth, honesty or ability of an actor. **How would you describe your trust towards Public Actor?**

    1 – Very low trust/very high distrust

    2 – Low trust/high distrust

    3 – Equally trust/distrust;

    4 – High trust/low distrust;

    5 – Very high trust/no distrust

13. **Reason for your trust (please, explain)**

14. **How did your trust towards Public actor change in the last five years?**

    1 – Decreased greatly

    2 – Decreased slightly

    3 – No change

    4 – Increased slightly

    5 – Increased greatly

15. **Reason for the change of trust (please, explain)?**

16. **Influence is** an overall ability of the public actor to have an effect on the development of the initiative. **According to your experience, what is (or was) the overall influence of Public Actor on your initiative?**

    1 – No influence

    2 – Strong negative

    3 – Moderate negative

    4 – Weak negative

    5 – Weak positive

    6 – Moderate positive

    7 – Strong positive

17. Public actors can influence the development of social innovation initiatives through their involvement in various activities, thus having different roles. **In what activities of your initiative are (or was) Public Actor involved in?** For each activity in which **Public Actor** is (or was) involved, evaluate how his or her involvement influenced the initiative**.** If an actor is (or was) not involved in particular activity, select *no role*. If actor is (or was) involved in particular activity, but was without influence, select *no influence*.

Activity	**Role of public actors**
Initiating	The actor is/was involved in raising the action to start the initiative
Creating Contacts & Networking	*The actor is/was involved in interacting and developing contacts for the initiative*.
Persuading & Lobbing	*The actor is/was involved in trying to influence the community members, influential persons, and officials with respect to the initiative*
Planning	*The actor is/was involved in making plans about the activities required to achieve the goal of your initiative*
Coordinating & Organizing	*The actor is involved in organizing people, groups, or organization to work together in the initiative activities*
Advising	*The actor is/was offering suggestions about the best course of action for the initiative*
Administrating	*The actor is/was involved in administrative procedures needed for managing the initiative (e.g. registration documentation)*
Financing	*The actor is/was providing funding for the initiative*
Providing Infrastructure	*The actor is/was providing basic structures and facilities (e.g. buildings, mechanization) to the initiative*

Providing Other Resources	*The actor is/was providing natural (e.g. land, forests) or human resources needed for the initiative*
Awareness Raising & Informing	*The actor is/was involved in communicating information to increase levels of awareness about the initiative*
Marketing & Promoting	*The actor is/was publicly supporting or actively encouraging and promoting the activities of the initiative*
Regulating & Monitoring	The actor is/was involved in overseeing the initiative's activities by means of laws and regulations
Other (please, specify)	

Scale:

1 – No role

2 – Strong negative

3 – Moderate negative

4 – Weak negative

5 – No influence

6 – Weak positive

7 – Moderate positive

8 – Strong positive

ENDING SECTION

18. Please share with us your general opinion about the involvement of public actors in your initiative or add any comment you think will be of importance for this research.

19. Would you like to receive the results of this research?

- Yes
- No

Thank you for your time and collaboration!

8.3 Section IV Study 4

Annexes D – E5 were published as Annexes of an article *Rogelja, T., Ludvig, A., Weiss, G., Secco, L., 2018. Implications of policy framework conditions for the development of forestry-based social innovation initiatives in Slovenia. For. Policy Econ. 95, 147–155. doi:10.1016/j.forpol.2018.07.011*

Annex D. Example of qualitative content analysis of the Operational Programme for Cohesion Policy 2014-2020

Original text	Page and Chapter	Theme	Instruments					Comment
			Statement	Financial	Informational	Regulatory	Networking	
Social inclusion is connected to support for social entrepreneurship, which has numerous development opportunities in store – either for the development of new products and services or for employment. Slovenia is well behind the EU average in this respect, as in the 2009-2010 period the share of employees in the social economy as opposed to all employees accounted for a negligible according to Eurostat data (EU 6.53%). A wide spectrum of different forms of social enterprises and non-profit cooperatives should therefore be supported. European Regional Development Fund (ERDF) support under priority axis 9 will be provided for community-led local development (CLLD) that allows the local population to set priorities and development targets on its own, thus shaping the future of local development.	1.1.1 Description of the strategy for the contribution of the operational programme to the EU strategy for smart, sustainable and inclusive growth (p.30)	Social inclusion	Yes	Yes	No	No	Yes	Explicit SE. Contribution of social enterprises to social inclusion in a sense of new product or service development. The social inclusion measures will be financed through ERDF, specifically trough CLLD, but the relation of CLLD with social enterprise is not explained.
Table 2: Synthetic overview of the justification for selection of thematic objectives and investment priorities Selected investment priority: Promoting business investment in R&I, developing links and synergies between enterprises,	1.2 Justification for the selection of thematic objectives and corresponding	R&D	Yes	No	No	No	No	Explicit SE. Only mentions social enterprise in a context

research and development centers and the higher education sector, in particular promoting investment in product and service development, technology transfer, social innovation, eco-innovation, public service applications, demand stimulation, networking, clusters and open innovation through smart specialization, and supporting technological and applied research, pilot lines, early product validation actions, advanced manufacturing capabilities and first production, in particular in key enabling technologies and diffusion of general purpose technologies	investment priorities in terms of the Partnership Agreement based on the identification of regional and, where applicable, national needs including those identified by the relevant Council recommendations (p.41, 51,69)							of business investments in R&D
Selected thematic objective: (8) Promoting sustainable and quality employment and supporting labor mobility Selected investment priority: Promoting social entrepreneurship and vocational integration in social enterprises and the social and solidarity economy in order to facilitate access to employment Justification of the selection: • Social entrepreneurship has great potential for social inclusion and employment of vulnerable groups. • There is a need to ensure an exit from social activation into employment and to support the employment of vulnerable target groups in social enterprises. • Establishing and linking social enterprises with the network of community-based services and ensuring their visibility. • In order to provide new services and give jobs to vulnerable target groups, social enterprises must be appropriately trained, so there is a need to provide training, education, mentorship and advice for all stakeholders in social entrepreneurship.	1.2 Justification for the selection of thematic objectives and corresponding investment priorities in terms of the Partnership Agreement based on the identification of regional and, where applicable, national needs including those identified by the relevant Council recommendations (p.46)	Social inclusion	Yes	No	Yes	Yes	Yes	Explicit SE. Only social enterprise is mentioned in the context of contribution to access to employment. The measure of providing information and training is mentioned, but not specified. Detailed measures are prescribed in the Strategy for Developing Social Entrepreneurship 2013-2020.

• The NRP 2013–2014 envisages carrying out of measures based on the adopted Strategy for Developing Social Entrepreneurship 2013-2020.								
Slovenia lags behind the EU in terms of social entrepreneurship, which represents a great potential for creating jobs for persons who exit social activation programmes and affords enterprises the chance of providing community-based services that will be developed under the second investment priority. This area will be given EUR 30 million (1% of total funds, 4.19% from the ESF, 2.24% in the cohesion region of Vzhodna Slovenija and in the cohesion region of Zahodna Slovenija).	1.3 Justification of the financial allocation (pp.49-50)	Social inclusion	No	Yes	No	No	No	Explicit SE. Financial allocation for social enterprises providing community-based services.
2.1.5 Social innovation, transnational cooperation and contribution to thematic objectives 1-7 The projects receiving support should demonstrate their contribution to broader social objectives (including social innovation) or to sustainable development (social, economic and environmental aspects) both in Slovenia and the wider setting. The investments made under this thematic objective will complement those made under thematic objective 3 and the projects under transnational and interregional initiatives. The supported projects will reinforce Slovenia's integration into the macro-regional and transnational context and throughout the EU, where additional synergies will be created especially through linking up with the instruments under Horizon 2020. Transnational cooperation is vital for building up and integrating research infrastructures where joint initiatives building on the ESFRI Roadmap will be created on the common points of national smart specialization strategies. Measures under priority axis 1 will help Slovenia integrate into the international environment, as practically every	2.1.5 Social innovation, transnational cooperation and contribution to thematic objectives 1-7 (72-73)	Cohesion	Yes	No	No	No	No	Explicit SI. Social innovation mentioned in a statement.

measure has been designed to be open for cooperation or upgrade in the region or beyond, which will help get the most out of the investments made in Slovenia and in other cooperating environments.								
Projects receiving support under this thematic objective should demonstrate their contribution to wider social objectives (including social innovation) or sustainable development (social, economic and environmental aspect). Investment under this thematic objective will complement the investment under thematic objective 1 and thematic objective 6.	2.3.5 Social innovation, transnational cooperation and contribution to thematic objectives 1–7 (p.93)	Cohesion	Yes	No	No	No	No	Explicit SI. Social innovation mentioned in a statement.
Transnational partners to implement joint programmes contributing to increased employment and employability … Slovenia will join those countries that will propose cooperation activities and will provide support to the development of own mobility schemes. As in the previous programming period, support will be given to social innovations that increase the added value of programmes. Joint projects of social partners and labor market service providers will merit particular attention in making a contribution to the achievement of the set objective.	2.8.6 Social innovation, transnational cooperation and contribution to thematic objectives 1–7 (p.172)	Participation	Yes	No	No	No	No	Explicit SI. Statement on support to social innovation in mobility.
Investment priorities will be linked and measures and activities will complement each other in order to develop a comprehensive approach to solving the problems of social exclusion and poverty. The links created between measures and activities will be highlighted during the promotion of social entrepreneurship, social activation measures and the development and strengthening of community-based services that will pursue measures for extension and improvement of infrastructure for implementing the process of deinstitutionalization. This will stimulate the participation of social enterprises in the implementation of social activation	2.9 Social inclusion and poverty reduction 2.9.1 Explanation for the establishment of a priority axis covering more than one category of region or more than one thematic	Social inclusion	Yes	No	No	No	No	Explicit SE. Social entrepreneurship recognized as contributor to solving social exclusion and poverty

programmes, and later on particularly the employment of people exiting social activation programmes. At the same time, these measures will provide social enterprises and other organizations with their area of work and operation within the framework of newly-developed and improved community-based services.	objective or more than one Fund (p.172)							
The following will be supported: linking social activation programmes with employment programmes and developing tailored forms of work where people will be included after exiting the social activation programmes, in transitions between programmes and transitions from programmes to the labor market or to employment in social enterprises, and other types of work and programmes, notably in the NGO sector, with a view to further pursuing monitoring and providing support to people after they exit social activation programmes, while ensuring that complementarities and coordination between the activities of other priority axes and investment priorities under the priority are achieved at all times (particularly 8 and 10); Development and establishment of tailored forms of work for people who exit the above-mentioned activation programmes, but are unable to enter the labor market due to their specific difficulties, or unable to perform at least part-time work, which is a precondition for being included in social entrepreneurship, which will be supported under the fourth investment priority, and public work which is funded from the national budget.	Specific objective 3: prevent the slide into poverty or social Exclusion and reduce health inequalities 2.9.3.1.1 Description of types and examples of actions to be financed and their expected contribution to the corresponding specific objectives, including, where appropriate, identification: (pp.180-181)	Social inclusion	Yes	No	No	No	Yes	Explicit SE. Social enterprise as contributor to social inclusion and work activation/
The identified horizontal principles will apply to the selection of future measures. In addition, priority will be given to projects that: encourage social entrepreneurship and job creation for vulnerable groups, if relevant;	2.9.3.1.2 Guiding principles for the selection of operations (p.182)	Social inclusion	Yes	No	No	No	No	Explicit SE. Priority to social entrepreneurship projects

Specific emphasis will be given to synergies of investment in infrastructure which will address numerous different user groups and tackle their housing situation, and to social innovation.	Specific objective: improve the quality of community-based care services (p.187)	Social inclusion	Yes	No	No	No	No	Explicit SI. Statement on emphasis to social innovation
Activities intended to revive social entrepreneurship in Slovenia in recent years coincided with the beginnings of the economic crisis, which has prompted a search for other, sustainable and more socially responsible business models able to create new employment opportunities for the growing number of unemployed people, especially those who require an adapted working environment to facilitate their inclusion in the labor force. Similarly, social entrepreneurship and its principles are increasingly recognized in Slovenia as the one organizational form of entrepreneurship that could become the right response to the growing need for social innovations and the development of new, notably social services and products, while being strongly integrated into the regional and local environment. Since social entrepreneurship is still in its infancy in Slovenia, the first step now is to provide appropriate conditions and a support environment for the creation of strong and sustainable social enterprises which will develop, respond to demands in a high-quality manner and have sufficient potential and know-how to develop services and offer employment and support to people who are unable to meet the usual demands in the labor market. Also, a lack of general entrepreneurial knowledge and skills additionally severely hampers the development of social enterprises. The measures under the investment priority will be complemented with measures under Priority Axis 3, i.e. with measures designed to increase the competitiveness of social enterprises (e.g. access to finance and to other support	2.9.6 Promoting social entrepreneurship and vocational integration in social enterprises and the social and solidarity economy in order to facilitate access to employment Specific objective: increase the scope of activities and employment in the social entrepreneurship Sector (189-190)	Entrepreneurship	Yes	Yes	Yes	Yes	Yes	Explicit SI. Explicit SE. Statement on the growing need for SI. Social enterprises as a response to the growing need for social innovation Focus on support of social entrepreneurship.

services for enterprises etc.). The expected result under this specific objective: increase the percentage of employed people among those participating in measures for social entrepreneurship promotion.								
Support will be earmarked for: • A support scheme that includes training, education, mentoring and counselling programmes for all stakeholders in social entrepreneurship, networking, promotion etc. • Participation of vulnerable groups in social enterprises (information, motivation and support during entry into employment in social enterprises or during participation in training at work for people from individual vulnerable groups). • Development of activities and employment in existing or new social enterprises in order to develop community-based forms of care for target groups, particularly in connection with measures from the first and second investment priorities. Target groups: Social enterprises, target groups in accordance with the Social Entrepreneurship Act and those who complete social activation programmes. Beneficiaries: Social enterprises, regional development agencies, VEM entry points, non-governmental organizations, social partners, chambers and associations and other development institutions at the regional level, public agencies (e.g. SPIRIT, etc.), social innovation providers and others who contribute to achieving the objectives of the investment priority through their actions.	2.9.6.1.1. Description of types and examples of actions to be financed and their expected contribution to the corresponding specific objectives, including, where appropriate, identification (pp.190-191)	Entrepreneurship	Yes	Yes	Yes	Yes	Yes	Explicit SI. Social innovation mentioned in a statement on 'social innovation providers'. Explicit SE. Connects with the framework for social entrepreneurship and describes 3 measures that include all policy instruments. Lists target groups and beneficiaries. It further specifies the guiding principles for the selection of operation, but in that part social innovation is not explicitly mentioned. Further on, output indicators (No. of participant and No. of social enterprises) are listed.

Job creation: Promoting entrepreneurial activities and innovative development partnerships: the action will support activities contributing to enhancing entrepreneurship, creativity and innovation, and support is expected for activities designed to increase entrepreneurship, creativity and innovation, and activities that contribute to the creation of conditions for the implementation of entrepreneurial initiatives, such as: development of activation tools, establishment of informal networks for promoting entrepreneurship (especially social entrepreneurship, SMEs), development and offering of local products and services in eligible areas, including the establishment of a local supplier network, activities for revival of village and city centers etc.	2.9.7 Investment under CLLD strategies 2.9.7.1. Actions to be supported under the investment priority (pp. 193-194)	Rural Development, Employment	Yes	Yes	Yes	No	Yes	Explicit SE. Highlights the important role of social entrepreneurship in the promotion of entrepreneurship and innovative partnerships under CLLD.
The priority axis will, as in the preceding programming period, support the development of social innovations, particularly programmes that link social and employment activation and employment in social enterprises or inclusion in training at work for people from individual vulnerable groups, which will represent added value for the programme. ESF funds under TO9 will be used to support measures that help increase the number of jobs in social entrepreneurship, and indirectly, enhance their potential contribution to economic growth, reduce poverty and support social services, healthcare, etc. Training programmes will be carried out and the existing support networks will be adjusted so as to facilitate the development of entrepreneurship and regional development of social entrepreneurship in order to create an efficient support environment. Support for social entrepreneurship activities and networking will also be provided through the development and networks of social entrepreneurship incubators. In addition, socially vulnerable	2.9.8 Social innovation, transnational cooperation and contribution to thematic objectives 1–7 (pp.195-198)	Social entrepreneurship	Yes	Yes	Yes	No	Yes	Explicit SI. Statement on the support to the development of social innovation. Explicit SE. Describes combined funding of social entrepreneurship. Detail indicators are presented divided by East and West Slovenia, as well as detailed budgeting from both eligible funds

groups will be included in social entrepreneurship projects. The measures for and development of social entrepreneurship are closely connected to the measures in the area of increasing competitiveness under TO 3, where adapted financial instruments co-financed by the ERDF will be available (e.g. micro loans). The common result sought is a greater contribution of social entrepreneurship to GDP.								
The projects supported under this thematic objective should demonstrate a contribution to wider social objectives (including social innovations), sustainable development (social, economic and environmental aspects). Investments under this thematic objective will be complemented to a reasonable extent with investments within the framework of thematic objectives 1–7 and projects within the context of transnational initiatives. As in the previous programming period, lifelong learning will give extensive support to social innovations that will add value to the programme.	2.10.6 Social innovations, transnational cooperation and contribution to thematic objectives 1–7 (pp.218-219)	Education	Yes	No	No	No	No	Explicit SI. Social innovation mentioned in a statement. Connection of lifelong learning with social innovation.
The "interoperability, transparency and open data" actions have a major impact on social innovations and transnational cooperation, and establish synergies with the majority of the thematic objectives.	2.11.5 Social innovation, transnational cooperation and contribution to thematic objectives 1–7 (p.238)	Legislative system	Yes	No	No	No	No	Explicit SI. Statemen on the impact of social innovation on better legislative system and public administration.
We need to address the dispersion of human capital and innovation potential of regions, which would in turn enhance productivity. This in turn is related to education, the efficiency of the innovation system and organizational and social innovations.	4. Integrated approach to territorial Development (p.269)	Cohesion	Yes	No	No	No	No	Explicit SI. Statement on connection among human capital, education and social innovation.

In addition to the funds under priority axis 11, nongovernmental organizations will be eligible to receive support primarily under priority axis 9, which focuses on social inclusion and reduction of poverty risk. The actions in the area of implementing prevention programmes, which prevent falling into poverty and focus on the development of community-based programmes and services as well as social entrepreneurship, will be of particular relevance.	7.2.3 Earmarking for capacity building (p.284)	Combination	Yes	No	No	No	No	Explicit SE. Relevance of social entrepreneurship for capacity building on social inclusion and poverty reduction
Priority axis 3: Investments of ESI Funds will primarily be linked to the COSME programme, with complementarity of support being established on a case-by-case basis. Synergies will also be established within the StartUp Europe programme (ICT companies), and in the framework of the new Programme for Employment and Social Innovation (social enterprises).	8. Coordination between the Funds the EAFRD, the EMFF and the other union and national funding Instruments, and with the EIB (p. 289)	Funding	Yes	Yes	No	No	No	Explicit SI. Explicit SE. The statement on SI that explicitly equals social innovation and social enterprise regarding synergies of funds
Priority axis 8: • The MA will primarily ensure consistency between the EU Programme for Employment and Social Innovation projects and the ESF-supported projects. Complementarity will also be established for actions to promote transnational labor mobility. A suitable mechanism will be established that will ensure thematic complementarity and upgrading of content while at the same time preventing double financing.	8. Coordination between the Funds the EAFRD, the EMFF and the other union and national funding Instruments, and with the EIB (p. 290)	Funding	Yes	Yes	No	No	No	Explicit SI. Statement on social innovation because of EU Programme for Employment and Social Innovation. Synergies of funds
Priority axis 9: Within the framework of the EaSI programme, the MA and other relevant institutions will, above all else, ensure complementarity between projects implemented under this programme with relevant ESF-supported projects. This will enable the developing and upgrading of examples of good	8. Coordination between the Funds the EAFRD, the EMFF and the other union and national funding	Funding	Yes	Yes	No	No	No	Explicit SE. Synergies of funds.

practice and prevent double financing. Adequate synergies will also be established with actions under priority axis 3, particularly in the field of financial support for social enterprises.	Instruments, and with the EIB (p. 291)							

Annex E1. Cohesion policy documents

The Slovenian Development Strategy 2030 (SDS) (Government Office for Development and European Cohesion Policy, 2017) represents a new umbrella development framework with the main goal to ensure a quality life for all through a balanced economic, social, and environmental development. SDS has five strategic directions and twelve development goals, for whose implementation a four-year development policy program and a medium-term fiscal strategy are yet to be prepared. SDS recognizes social innovation (SI) as a mean for achieving a decent life for all and for raising productivity and improving the organizational efficiency of public bodies. For the fulfillment of the objectives 6 and 7 (*Inclusive labor market* and *Quality jobs*) instruments that are suitable for supporting social enterprises (SE) are prescribed. Objective 6 prescribes promoting the social and environmental responsibility of businesses and research organizations, while Objective 7 prescribes promotion of greater involvement of disadvantaged and under-represented groups in the labor market. Forestry is tackled by objective 9 (*Sustainable management of natural resources*) where one of the prescribed instruments deals with ensuring the sustainable development of forests as an ecosystem in terms of its ecological, economic, and social functions. As a strategic umbrella document, SDS addresses SI explicitly and implicitly by statements, vaguely indicating policy instruments without specification of the means for implementation.

Operational Programme for the Implementation of the EU Cohesion Policy 2014-2020 (OP) (Governmental Office for Development and European Cohesion Policy, 2015a) is the key implementing document for the investment of EU Cohesion Policy Funds for the realization of the national and Europe 2020 targets for smart, sustainable, and inclusive growth. It is the basis for the drawing finances from all three European Cohesion Policy Funds (European Regional Development Fund, European Social Fund, and Cohesion Fund). The OP aims to encourage economic development and ensure prosperity for all citizens in Slovenia. It aims to strengthen

research and development, boost the innovation potentials of small and medium-sized enterprises (SMEs), promote resource efficiency and reduce environmental pressures, further develop the transport sector, boost the employment, and reduce the number of people at risk of poverty and social exclusion.

The total EU funding for the implementation of OP is EUR 3.011 billion.

OP defines priority axes on the national level. It has 11 priority axes (PA) that address 11 EU2020 objectives. SI is addressed explicitly in the introductory part of OP as contributing to EU strategy for smart, sustainable, and inclusive growth by contributing to social inclusion via SE. Within the description of PA, SI is addressed only statements as a contributor to:

- International competitiveness of research, innovation, and technological development in line with smart specialization for enhanced competitiveness and greening of the economy (PA2)
- Dynamic and competitive entrepreneurship for green economic growth (PA3)
- Promoting employment and supporting transnational labor mobility (PA8)
- Social inclusion and poverty reduction (PA9)
- Knowledge, skills, and lifelong learning to enhance employability (PA10)
- Rule of law increased institutional capacity, efficient public administration and capacity building of NGOs and social partners (PA11)

While the PA uses the term SI, the indicators of each priority axes refer only to SE. Thus, only SE are addressed by explicit policy instruments:

1) Financial – different possibilities of financing SE (i.e. grants, credits, subventions, etc.)
2) Informational – different means for spreading the information on and for SE (i.e. contact points, training, promotion, etc.)
3) Networking – different means for the support of existing or creation of new networks (i.e. hubs, clusters, etc.)

4) Regulatory – different means for change of existing or establishment of new regulations (i.e. new accounting rules for SE, strategy for the development of SE, etc.)

In this way, OP interchangeably uses the terms SI and SE, addressing SI only with proclamations and narrows SI meaning to SE when it comes to the prescription of the explicit policy instrument.

Slovenian Smart Specialization Strategy (S4) (Governmental Office for Development and European Cohesion Policy, 2015b) was adopted in 2015. S4 is the key strategic document of the Government of the Republic of Slovenia in the field of innovation, serving as the basis for Slovenia's development policy. Development and adoption of S4 was a precondition for using EU structural funds in the field of research, development, and innovation. The mission of the S4 is to position Slovenia as a co-creator and not a follower of global trends. "S4 strategic objective is SUSTAINABLE TECHNOLOGIES AND SERVICES FOR A HEALTHY LIFE on the basis of which Slovenia will become a green, active, healthy and digital region with top-level conditions fostering creativity and innovation focused on the development of medium- and high-level technological solutions in niche areas "(Governmental Office for Development and European Cohesion Policy, 2015b, p. 8; emphasis in the original).

Although S4 aims are formulated in the light of increasing competitiveness of the Slovenian economy, the document states that "S4 is based on a model of 'open and responsible innovation', including 'social innovation' " (Governmental Office for Development and European Cohesion Policy, 2015b, p. 9), putting the emphasis also on non-technological and social aspects of innovation. S4 refers to explicitly to SI and SE mostly in the part of *Growth and development of SMEs*. More specifically, S4 refers explicitly to SI when addressing horizontal, entrepreneurship-related measures for boosting innovation. While S4 refers to SI by several statements, for addressing SE, S4 prescribes policy instruments:

1) Financial – different possibilities of financing social innovation projects (i.e. grants, credits, subventions, etc.)
2) Informational – different means for spreading the information needed for social innovation project are prescribed (i.e. contact points, training, promotion, etc.)
3) Networking – different means for the support of existing or creation of new networks are prescribed (i.e. hubs, creativity centers, etc.)

S4 recognizes the potential of forestry within the 2nd objective of the priority area *1.2 Smart buildings and homes*, which focuses on inter-sectoral networking and integration of the wood chain in the design of homes and working environment by promoting research and innovation based on the traditional knowledge and skills of the use of wood. Forestry is also tackled by the priority area *2.2 Networks for the transition to a circular economy*, which addresses technologies for sustainable biomass transformation and new bio-based materials. For fulfilling the objectives within these two priority areas, S4 calls upon policy instruments prescribed in the PA4 (*Supporting the shift towards a low-carbon economy in all sectors*) of the Operational Programme for the Implementation of the EU Cohesion Policy 2014-2020 (OP), where the contribution of SI is recognized as not relevant.

Similarly to OP, S4 interchangeably uses the terms SI and SE. While SI is referred explicitly only by proclamations, SE is addressed by several policy instruments.

Annex E2. Social entrepreneurship policy documents

The sector of social enterprises (SE) in Slovenia is regulated by several documents. The basis for the legal recognition and operating of SE provides the *Law on Social Entrepreneurship (LSE)* (Official Gazette of RS No.20/2011), adopted in 2011. LSE regulates the conditions and methods for acquiring (and withdrawing) the status of a SE, defines the objectives and principles of SE, SE activities, the special conditions for the operation of SE and supervision in this field. It also provides incentives for the development of SE and governs its' development policies.

LSE defines social entrepreneurship as a permanent conducting of social entrepreneurship activities or the permanent conducting of other activities under specific employment conditions, with the production and sale of products or the provision of services on the market, and the creation of profits which is not the main objective of the activity (Official Gazette of RS No.20/2011, §3). The key objectives of SE are: strengthening social solidarity and cohesion, promoting people's involvement and volunteering, strengthening the innovative ability of society to tackle social, economic, environmental and other problems, providing additional supply of products and services in the public interest, developing new employment opportunities, providing additional jobs and social integration and the professional reintegration of the most vulnerable groups of people in the labor market. According to LSE, only a non-profit legal entity can register as a SE, meaning that organizations operating in the field of SE should have one of the following forms: society, institute, foundation, company, cooperative, European cooperative, or other legal entity of private law. According to §9 of LSE, the employment institute or enterprise employing disabled people cannot register as SE if in a process of bankruptcy. To register as SE, non-profit legal entities need to fulfill the following 11 principles determining the governance of SE. In addition, LSE calls upon the *Decree determining social entrepreneurship activities (DSEA)* (Official Gazette of RS No.54/12 and

54/14) for prescribing the fields of activities of SE. After amendments in 2014 (Official Gazette of RS No.45/14), those activities range from social security and inclusion to food production, forestry, wood processing, renewable energy sources, green economy, tourism, culture, and sports. LSE recognizes 2 types of SE:

- Type A: SE is established for the permanent conducting of the activities of the social entrepreneurship and permanently employs at least one worker in the first year and at least two workers in subsequent years
- Type B: SE is established for the employment of vulnerable groups (defined in §6), so to conduct its activities by permanently employing at least one-third of workers from vulnerable groups from all employees.

SE is not allowed to share its property, exploit its profit and surplus of revenue. The exploitation of profit is limited by LSE. Profit or surplus must be invested in the future development of SE. SE may share a portion of the profit or surplus of revenue in a proportion that may not exceed 20% of all the generated profit or surplus revenue in a given year, and only if the excess of revenue does not represent unused public funds and is defined in the instrument of incorporation or in the basic act. If a SE shares part of the profit or surplus income, it cannot exclude its employees (Official Gazette of RS No.20/2011, §11, §26). All SE, regardless of their legal form, must apply a special *Accounting standard for social enterprises – SRS 40* (Official Gazette of RS No. 2/12). Monitoring of the SE, conditions for beneficiaries of incentives of measures for supporting the development of SE, as well as conditions for implementing bodies of support measures for SE is regulated by *Rules on the Monitoring of the Operation of Social Enterprises (MOSE)* (Official Gazette of RS No. 35/13, 2013), adopted in 2013.

LSE also prescribes the measures for promoting the development of SE in Slovenia. Promoting the development of SE is ensured through the implementation of measures for the promotion of SE, measures for creation of a favorable entrepreneurial environment, measures for promoting

employment and measures for providing access to sources of financing and investments in SE. LSE enables the active role of municipalities in the planning and implementation of SE development policies.

While LSE does not explicitly address SI, it might be applied to SI initiatives if registered as SE. LSE explicitly addresses SE by statements, as well as by prescribing:

1) financial instruments – financing of SE support environment, subventions for SE start-ups, special subventions, etc.
2) information instruments – promotion of SE, advisory services
3) networking instruments – incubators
4) regulatory – from new regulatory documents, and rules of conducts for SE to penalties and monitoring.

The implementation of the measures for promoting the development of SE is governed by the *Strategy for the Development of Social Entrepreneurship for the period 2013 – 2016 (SDSE)* (Council for Social Entrepreneurship, 2013), adopted on July 2013. SDSE covers the analysis of the needs and direction of the potential development of social entrepreneurship, the foundations of development policy, strategic development goals and the main fields of social entrepreneurship development, the role of the state, its bodies and municipalities in the implementation of specific policies and achievement of development goals. The strategy defines three strategic objectives with respective fields of actions:

1) increasing the visibility of SE and the knowledge of the principles of SE
2) upgrading the existing supportive environment for entrepreneurship
3) promoting the employment of vulnerable groups in the labor market.

SDSE also prescribes the responsible national bodies for implementation of the strategy. The main responsible body for the implementation of the SE policy is the Ministry of Labor, Family, Social Affairs, and the Equal Opportunities with jurisdiction in planning and implementation

of labor policies. With respect to SE, that ministry is responsible for the organization of learning workshops for SE Type B, as well as for co-financing of training and education of persons working with vulnerable groups. Ministry for Economic Development and Technology is responsible for supporting establishment, development, and growth of SE Type A. Other listed ministries (i.e. Ministry for Infrastructure and Spatial Planning, Ministry for Agriculture, Forestry and Food, etc.) are responsible for the implementation of SE policies within their sectors.

SDSE addresses only SE explicitly, by statements on responsibilities and loose formulations of policy instruments the responsible ministries should use within their activities for SE. It further calls upon *Program of Measures 2014-2015 for the Implementation of the Strategy for the Development of Social Enterprise for the Period 2013-2016* for prescribing policy instruments as means for implementation.

Based on SDSE objectives, Ministry of Labor, Family, Social Affairs, and the Equal Opportunities, in cooperation with other responsible ministries for SE, prepared *Program of Measures 2014-2015 for the Implementation of the Strategy for the Development of Social Enterprise for the Period 2013-2016 (PMSE)* (Ministry of Labour, Family, Social Affairs, and Equal Opportunities, 2014), which entered on the force in the middle of 2014. PMSE details 15 measures and 39 activities that should lead to the fulfillment of the 3 SDSE's objectives. For fulfilling the first objective (*Increasing the visibility of SE*), PMSE prescribes one measure containing 9 specific activities, with informational instruments (promotion and informing). Second objective (*Upgrading existing supportive environment*) contains 9 measures with 26 specific activities. Those 26 specific activities employ all four types of policy instruments:

1) Regulatory – amendments to the LSE, Amendments to the Act on the Property of the State and Self-Governing Local Communities procurement with LSE;
2) Financial – new financing schemes and subventions

3) Informational – education and training for SE and SE advisors
4) Networking – cooperation

Instruments within the measure 2.4 are dedicated to promoting the development of SE in rural areas, and its means for implementation are tightly connected with the measures of Rural Development Programme. For the third objective (*Employment of vulnerable groups*), PMSE outlines 4 measures with four activities which prescribe regulatory, financial, and informational instruments. SDSE does not address SI explicitly, whereas it addresses SI implicitly through the measure 2.4. related to cooperation.

The development of the new Law on Social Entrepreneurship is still ongoing, while Strategy on Social Entrepreneurship will become a part of a broader Strategy on Social Economy (E1). These changes are ongoing as a part of a Government strategic development *Project P9: Support to the development of social entrepreneurship, co-operatives and democratic economy* (Slapnik, 2016). Project P9 has 5 operational objectives, from which 3 are related to the development of regulation and organizational structure of the social economy, 1 is related to deinstitutionalization and 1 is related to the development of financial support mechanisms for SE. Most of the objectives should be fulfilled until the end of 2018, while objective related to SE should be fulfilled until March 2019. The funds related to the implementation of public tenders in the field of SE in the financial perspective 2014-2020 within the Ministry of Economic Development and Technology amount to little less than EUR 16 million, from which national financing amounts to approximately EUR 4 million, while other EUR 12 million should be financed from EU funds. The funds are divided into five categories:

1) Material and energy efficiency – cooperatives (approximately EUR 4 million)
2) Strengthening the support environment for social enterprises (approximately EUR 1.3 million)

3) Incentives for the creation of companies and youth cooperatives (approximately EUR 4 million)
4) Mentoring schemes for social enterprises (approximately EUR 6 million)
5) Transnationality in the field of social entrepreneurship (EUR 250 000).

Expected immediate effects on the completion of the project are 3.250 new jobs in the SE and 0.3% increase in the contribution of the SE sector to GDP. While Project P9 explicitly address SE, we consider that it might implicitly address SI trough cooperatives for material and energy efficiency.

Annex E3. Rural development policy documents

The Rural Development Programme of the Republic of Slovenia for the period 2014–2020 (RDP) (Ministry of Agriculture Forestry and Food, 2015) was adopted in 2015. It is a joint programme document of the Republic of Slovenia (RS) and the European Commission, that constitutes the basis for the absorption of financial resources from the European Agricultural Fund for Rural Development (EAFRD). The RDP reflects national priority tasks based on the situation in agriculture, food technology, and forestry and the interaction of these economic sectors with other operational fields. The RDP 2014-2020 budget is approximately EUR 1.1 billion of which EUR 838 million is financed from EAFRD. More than 20% of the funds have been allocated to strengthening competitiveness, over 9% to market integration, almost 52% to the natural resources and more than 15% for diversification purposes. The rest has been earmarked for technical assistance and the payment of liabilities for the preliminary programme period (Ministry of Agriculture Forestry and Food, 2017b). The RDP 2014-2020 contains 14 measures and 19 sub-measures.

Several sub-measures explicitly address SE. Sub-measure *M4.1 Support for investments in agricultural holdings* entitles SE as potential beneficiaries (among other entitled beneficiaries) of non-refundable financial aid. To be eligible for this sub-measure, SE must be "entered into the Register of agricultural holdings and recognized as holders of social marketing innovations in self-sufficiency and locally produced food who employ vulnerable groups and create green jobs" (Ministry of Agriculture Forestry and Food, 2017b, p. 10). Agricultural holdings can be reimbursed 30-50% of investments in the primary processing of agricultural products. The total amount of funds for this sub-measure in the period 2014-2020 amount to approximately EUR 99 million.

Sub-measure *M6.4 Support for investments in the establishment and development of non-agricultural activities* introduces financial instruments and forms of repayable financing

(financial guarantees to insure bank loans). Beneficiaries are natural persons and micro-enterprises in the rural areas, as well as small enterprises intended to add value to wood (that are not supported under sub-measure M8.6). Within this sub-measure priority will be given to non-agricultural activities related to adding value to wood, local self-sufficiency, green tourism, natural and cultural heritage, and traditional knowledge, SE, social protection services, organic waste management, heat, and power generation from renewable energy sources. The total amount of funds for this sub-measure in the period 2014-2020 is a bit more than EUR 42 million.

Besides measure *M1 Transfer of knowledge and information activities* which supports vocational education and training in forestry, measures *M3 Support for investments in infrastructure related to the development, modernization or adaptation of agriculture and forestry* and M9 *Setting up of producer groups and organizations* entitle private forest owners and their associations, agricultural and pasture communities, and other natural and legal persons authorized to implement investments as beneficiaries of non-refundable financial aid.

Measure *M8 Investments in the development of forest areas and the improvement of forest viability* is strictly related to forestry and contains two sub-measures. While for sub-measure *M 8.4 Support for remedying damage to forests due to forest fires and natural disasters and catastrophic events* beneficiaries are private and public forest owners (including agricultural communities), for sub-measure *M8.6 Support for investments in forestry technologies and in processing, mobilization and marketing of forest products* beneficiaries are also legal persons, agricultural and pastoral communities, and companies that comply with the conditions for micro, small or medium-sized enterprises and are engaged in timber felling and harvesting.

According to the *Decree on the measure for capital investments and on the sub-measure for the support for investments into forestry technologies, processing, mobilization, and marketing of forestry products pursuant to the Rural Development Programme of the Republic of Slovenia*

2014–2020 (DCI) (Official Gazette of RS No. 104/15, 32/16, 66/16, 14/17, 38/17 in 40/17 – popr.), the level of public support for investments in agricultural holdings is 30% of the eligible investment costs and shall be increased by 10 % for investments by SE.

Trough M4.1 and M 6.4. only SE are explicitly addressed by financial policy instrument. Although other measures and sub-measures do not explicitly mention SE, some of them are formulated in a way that allows SE to apply for funding (Table B3.1). Measures M1, M3, and M8 prescribe informational and financial policy instruments, and could implicitly address SI if the beneficiary would be SI initiative with an adequate legal form to apply. For example, Study Circles (if with suitable legal form), as SI initiatives for informal learning in forestry that include older inhabitants of rural areas and local foresters, could apply for M1.

Table B3.1. RDP measures, beneficiaries, and aid type

Measure	Brief description	Beneficiaries	Aid type
M4.2	Support for investments in the processing, marketing and/ or development of agricultural products	legal persons engaged in the processing or marketing of agricultural products as companies, cooperatives, or institutes registered agricultural and pastoral communities processing milk on a common pasture or plain	refundable and non-refundable financial aid
M9	Setting up of producer groups and organizations	newly-established producer groups that must be legal entities and fulfill the conditions for micro-, small, and medium-sized enterprises established in agriculture or forestry	non-refundable financial aid
M16.2	Support for pilot projects and for the development of new products, practices, processes, and technologies	various forms of cooperation among entities in the agricultural sector, in the food chain and in the forestry sector and other entities that contribute to achieving the objectives and to implementing priority tasks within the rural development policy, including producer groups, cooperatives, and inter-branch organizations	non-refundable financial aid
M16.4	Support for horizontal and vertical cooperation between stakeholders in the supply chain aimed at establishing and	co-operatives companies	non-refundable financial aid

	developing short supply chains and local markets and for promotion activities at the local level, which are related to developing short supply chains and local markets		
M16.5	Support for joint measures aimed at mitigating climate change or adapting to climate change and for joint approaches to environmental projects and permanent environmental practices	forms of cooperation among different entities (agricultural sector, in the food chain and in the forestry sector and other entities that contribute to achieving the objectives and to implementing priority tasks within the rural development policy, including producer groups, cooperatives, and inter-branch organizations operational groups of the EIP for agricultural productivity and sustainability	non-refundable financial aid
M16.9	Support for the diversification of farming activities to activities concerning health care, social integration, community-supported agriculture and education about the environment and food	legal entities performing activities in education, health care, social protection, protection of persons with disabilities or humanitarian activities other legal persons performing non-profit activities in health protection or social integration of vulnerable social groups	non-refundable financial aid
M19.1	Support to local development within the leader initiative (community-led local development)	local partnerships which prepared Local Development Strategies legal persons Local Action Groups groups of natural and legal persons performing operations for the common benefit and/or common use	non-refundable financial aid

Source: Own elaboration based upon Ministry of Agriculture Forestry and Food (2017)

Decree on the implementation of community-led local development in the programming period 2014-2020 (DCLLD) (Official Gazette of RS No.42/15) was adopted in 2015. It aims to support local development using bottom-up approach through social inclusion, the fight against poverty and economic development and to reduce regional developmental disparities, by creating new work opportunities and including vulnerable groups under the measure M19.1 of RDP. DCLLD regulates the establishment and operating of Local Action Groups (LAGs), as well as the

content of the Local Development Strategies. The measures for the implementation of DCCLD are prescribed in the RDP 2014-2020 trough measure M19, for which public calls were not open until 2018. As the precondition for LAGs is a bottom-up approach, it implicitly refers to SI and prescribes financial and regulatory policy instruments.

Annex E4. Forest policy documents

Slovenian forestry is regulated by the number of documents (strategies, operational programmes, action plans, laws, etc.), but none of them explicitly address SI or SE. Nevertheless, those documents contain provisions that only implicitly address SI.

Resolution on National Forest Programme (RNFP) (Official Gazette of RS No 111/07) is an umbrella strategic document that shapes the national policy of sustainable forest management, adopted in 2007. RNFP aims to ensure the preservation of forests and their multi-functionality based on the regional ecosystem approach. RNFP addresses environmental, economic, and social aspects of forests in separate chapters, by describing the (then) current situation, assessing the development potentials and defining objectives, guidelines, and indicators.

Chapter 7 on Economic aspects outlines factors related to private forests that reduce their economic incidence, amongst which are factors related to private forest holdings, low level of innovation, and insufficient social awareness of the importance of wood. As a development potential RNFP recognizes opportunities for hunting, tourism, recreation, and crafts. Further on, RNFP states for the development of rural areas knowledge should be improved that would "lead people to better innovativeness and entrepreneurship and more added value" (Official Gazette of RS No 111/07, p.52.). Based on the impeding factors, amongst objectives are those related to associating PFOs, an increase of education of PFOs, incentives for improvement of ecological and social functions, better participation in decision making regarding private forests, as well as an increase of the scope of activities using wood in rural areas, tourism, and recreation. Chapter 8 on social aspects stresses that factors reducing social aspects of forests are all those factors which threaten or reduce environmental and economic aspects but prescribes different objectives from those environmental and economic aspects. Those are a contribution to the quality of life and health of all citizens, providing employment and profit to people living in rural areas, the creation of an arranged environment to cultural heritage sites

and a contribution to the development of tourism, and increasing the awareness. Chapter 12 deals with the education of forest owners, while Chapter 13 focuses on public awareness-raising and participation in decision making. Chapter 15 is dedicated to financing, where the 3rd objective is related to co-funding of activities increasing the added value of wood and non-wood forest products as a contribution to the development of rural areas, whose indicator is the realization of RDP.

RNFP address SI implicitly, trough statements on potentials of social aspects of forests (i.e. tourism development, non-wood forest products), as well as trough objectives and guidelines for the management of private forests (i.e. stimulating the association of PFOs). As an umbrella strategic document in forestry, RNFP does not specify policy instruments for the achievement of objectives. Those policy instruments are specified in the Operational Programme for the Implementation of the National Forest Programme 2017-2021 (OPNFP).

Operational Programme for the Implementation of the National Forest Programme 2017-2021 (OPNFP) (Ministry of Agriculture, Forestry, and Food, 2017b) represents a link between the NFP and documents that form the basis for the planning, implementation, and monitoring of forest policy measures at the lower administrative and organizational levels. OPNFP defines 4 priorities and 10 measures and prescribes the tasks, holders, deadlines, necessary funds, indicators, and target values. Two measures of OPNFP could be of relevance for SI.

Priority 2, measure 2 (M2) that addresses the sustainability of forest yield and the enforcement of all forest functions recognizes that the use of forests for non-timber forest products (hunting, bee-keeping, harvesting of fruits and other material goods of the forest, tourism, and recreation, etc.) is increasing, but the economic effects of this use are not. It also recognizes that there is almost no cooperation amongst PFOs with the purpose of forest management and business. The OPNFP states that situation should be improved through support to producer organizations in the field of forestry under Measure 9 of RDP 2014-2020. Priority 4 addresses encouragement

of coordination and communication between stakeholders related to forests and forestry and prescribes measure M9 for establishing permanent formal “Forest Dialogue”. The aim of “Forest Dialogue” is an improvement of communication and coordination among all relevant stakeholders. For financing of all measures, OPNFP predicts approximately EUR 34 million per year, until 2021.

OPNFP is addressing SI implicitly trough measure M2, that can be applied to innovative forms of organizations of PFOs or producers’ organizations. While M9 might seem like the SI initiative, it is initiated by the public actors in a top-down manner. As this measure was still not implemented in the practice, it is uncertain who and in what way will be included in the forest Dialogue. For both measures, OPNFP indicates financial, information and networking policy instruments for implementation.

Action Plan for Increasing Competitiveness of Forest Wood Chains in Slovenia to 2020 "Wood is Beautiful" (AP) (Ministry of Agriculture and Environment and Ministry of Economic Development and Technology, 2012) was adopted in 2012 with the aim of increasing the competitiveness of the entire wood chain, from forests to final products. The expected result of the AN should be the opening of new and different jobs and achieve the high added value in the wood processing industry in Slovenia. AP sets out measures for intensifying forest management, mainly from an economic, and partially from a social point of view. Measure 2.1 is related to supporting the establishment and cooperation among producers’ organizations working in the forest and wood processing sectors with the aim of increasing the realized feelings. AP stresses the importance of financing this measure mostly from RDP, with an assigned budget of EUR 1 million. Besides forestry-related measures, other measures target wood processing industry and biomass production and utilization for energy purposes. AP addresses SI implicitly trough measure 2.1, that supports the establishment of producers’

organization. For this measure AP prescribes the networking policy instrument, that should be financed through RDP.

Forest Act (FA) (Official Gazette No. 30/93, 56/99 – ZON, 67/02, 110/02 – ZGO-1, 115/06 – ORZG40, 110/07, 106/10, 63/13, 101/13 – ZDavNepr, 17/14, 24/15, 9/16 – ZGGLRS in 77/16) was adopted in 1993 and amended several times. It regulates the protection, planning, management, exploitation and use of forests as natural resources, and prescribes formulation of strategic and planning documents in forestry. It also regulates the responsibilities and tasks of State Forest Service, research, and education organizations in the field of forestry, and private forest ownership. FA supports the formation of associations of private forest owners and machinery circles. It enables private companies to conduct forest works if the personnel have an adequate professional background. FA implicitly addresses SI trough provisions on voluntary associating PFOs and establishment of Machinery Circles. FA in this way prescribes regulatory and networking policy instruments. FA was also enabling concessions in the state forests, but this changed in 2016 with the adoption of *Management of State Forests Act (MSFA)*(Official Gazette of RS No. 9/16), which enabled the establishment of the State Forest Enterprise "Slovenski gozdovi". MSFA does not address SI implicitly or explicitly.

Annex E5. Environmental policy documents

Framework Program for the Transition to the Green Economy with the Action Plan for the Implementation of the Framework Program and Plan of Activities of Ministries and Government Services 2015-2016 (FPGE) (Ministry of Environment and Spatial Planning, 2015) was adopted in 2015. FPGE aims to actively support the process of transition to the green economy as quickly as possible and to integrate measures and sectoral policy activities. FPGE addresses the forest as a renewable natural resource with a multifunctional role that requires sustainable management. Further on, FPGE addresses sustainable management of natural resources as an opportunity for increasing social inclusion. That is how 3rd priority of FPGE targets promoting employment in green jobs and training of the people on the labor market for the needs of the green economy. This priority calls upon the measures of Operational Programme for the Implementation of the EU Cohesion Policy 2014-2020 that address supporting the development and innovation of local employment and encouraging the development of SE type B to be linked to the green jobs. FPGE further specifies responsible bodies and their tasks related to the priorities in general terms in connection to other relevant policy documents and regulations. As FPGE does not specify activities and policy instruments for implementation, it addresses SE only with statements.

Strategic Framework for Climate Change Adaptation (SFCAA) (Ministry of Environment and Spatial Planning, 2016) was adopted in 2016. It provides guidelines for adaptation to climate change in Slovenia and specifies individual horizontal measures or activities that may contribute to adaptation to climate change. Those are targeting mainstreaming, cooperation, research and knowledge, and education and training. SFCAA specifies that for the dissemination of information on climate change adaptation cooperation should be established with the non-governmental and private sector. This is the only statement that implicitly addresses SI.