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# Discourses on social innovation and abandoned land reutilization pathways. A case study on riverside landscapes in a mountain area of Spain

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The article aims to analyze, based on a multiple case study, the discourses of the individuals that promote social innovation (SI) initiatives for the reuse of abandoned riverside landscapes, connecting SI theory with land reutilization and management through discourse analysis. Following a qualitative methodology, the text analyses the characteristics of the promoting actors, the discourses storylines and the main actors' discourses, describing some relevant aspects regarding SI, such as why, where and when it takes place; how it has been developed; who has promoted it; its main results, as well as the barriers faced for its development and future opportunities for the territory. Two main discursive tendencies are identified: a negationist trend and a possibilistic one, adopted by individuals who are not promoting initiatives of SI and by promoters of these kinds of experiences, respectively. Possibilistic discourse underlines the coherent articulation between the economic-managerial dimension and the emotional-territorial one, and there is, in this case, a tendency to change in the visions of the territory, reconfiguring the social practices of the actors involved in these initiatives of SI. We conclude that discourses behind successful processes of SI are associated with certain positions on the interrelationships between individual-collective-institutionality-nature and that there is a complex articulation

between discourses on SI and social practices developed by individuals as part of these initiatives, in such a reflexive way that discourses advance the desired changes, drawing and modifying the future vision of the subjects, and making the impossible possible.

#### KEYWORDS

social innovation (SI), riverside landscape, land reutilization, discourses, mountain area

## Introduction

Agricultural land abandonment (ALA) is a complex, multidimensional and non-linear global phenomenon (Huang et al., 2020; Subedi, 2022) with strong implications for biodiversity, ecosystem services and human wellbeing (Pazúr et al., 2020). Its measurement at a global level is not easy due to the disparity of methodologies and data, but previous studies show that it is a widespread process in the Global North that affects developed countries and particularly southwestern Europe (Van Vliet et al., 2015; Frei et al., 2020).

Across the literature, the concept of ALA shows two key features: land condition after or during transition and the number of years without agriculture (Beilin et al., 2014). The FAO definition of ALA has been commonly accepted and refers to the cessation of farming and giving away land for nature, without signs of management for at least 4 years (UN FAO, 2006). However, its conceptualization is complex and can depend on the agricultural practices common for the specific territory (Prishchepov et al., 2020). Here the abandonment of land is a process that implies the reduction or cessation of economic activities over time in a certain area that is not occupied by another activity or for urbanization, agriculture or recreational uses (adapted from Sanz-Hernández, 2021b).

Agricultural land abandonment has been widely addressed in the academic literature (Huang et al., 2020). There is a diversity of approaches to document its patterns and the complex interplay of multiple underlying causal factors (Terres et al., 2015) and consequences (Rey Benayas et al., 2007). Biophysical, economic, demographic, regulatory, socio-political drivers, as well as household and farm characteristics are the most commonly aspects studied. Some of these factors are common across regions; however, others are site-specific ones (Subedi, 2022), so case studies at the local level are needed.

Regarding its consequences, Subedi (2022) highlight that most of the studies on ALA focus on analyzing the negative impacts of the phenomenon especially for agrobiodiversity and rural household livelihoods and communities; while fewer studies focus on its positive impacts included enhancing biodiversity and ecosystem services. The major existing research gap on this topic is the possible pathways for reutilization

of abandoned land (Pazúr et al., 2020; Subedi, 2022), so it's necessary a proper discussions on the types of management options that have potential for reutilizing abandoned farmlands for productive use" (Subedi, 2022). This study aims to contribute to reducing this research gap and to enrich the understanding of the social dimension related to the process of abandonment and re-use of abandoned lands, emphasizing the role of the social sciences for better understanding how to unravel the process of land reutilization.

To address the underexplored aspects on this topic, the study has been designed with three specificities:

(1) The object of study focuses on riverside landscapes, which is an unusual area in studies of ALA. There is a large number of terms to refer to this land but we use the generic notion of riverside landscapes in order to refer to those lands that are located next to rivers or irrigation canals that are irrigated or potentially irrigable. We focus not on the fertile lands of important river basins but on those located in mountain areas with high risk of abandonment. Riverside landscapes are fertile lands presenting productive potential due to the possibility of applying water to the crops that need it. In addition, these zones are usually located near inhabited areas, providing the population with a large number of ecosystem services. We also highlight its cultural dimension, since the riverside landscapes have been articulated around the rivers that are usually sources of identity for the communities established next to them. There is a wide variety of riverside landscapes, depending on their degree of management and uses: some of them have been totally abandoned while others have some degree of economic activity, including productive uses or non-productive ones with a more social or cultural nature (for example: recreational areas, living laboratories, social or school gardens). The reuse of abandoned riverside landscapes, as an object of study, connects with current debates surrounding the abandonment of farmland and the land reuse, exploring if an active intervention or management is needed (Lasanta et al., 2015; Pereira and Navarro, 2015; Bell et al., 2020) and, if so, how it can be activated (Munroe et al., 2013; Kuntz et al., 2018; Kumm and Hesse, 2020).

(2) Theoretically, this study connects social innovation (SI) theory with land reutilization and management, in a

sustainable transition context in rural areas. Rural development and global sustainability are two challenges faced by the rural Europe (Marini Govigli et al., 2020), where SI is becoming a relevant tool (Vercher et al., 2021). The European Commission has stressed the importance of innovation and the need of articulation between economic, administrative and SI (Martínez Moreno et al., 2019). SI is a specific type of innovation that, in rural contexts, has manifestations that expand the dominant paradigm, in which innovation is linked to agglomeration economies, high-tech activities and market-oriented initiatives (Vercher et al., 2021). In addition to that, SI reconfigures the social practices in response to societal challenges, seeks to enhance outcomes on societal wellbeing and necessarily includes the engagement of civil society actors (Polman et al., 2017, p. 12). Previous studies underline the growing role of SI (Silveira and Zilber, 2017; Eichler and Schwarz, 2019) in promoting sustainable development processes in European rural areas (Klůváňková et al., 2018, 2021; Eichler and Schwarz, 2019), giving momentum to the emerging phenomenon of SI (Vercher et al., 2021). However, despite this, research on SI is still a very recent trend within rural studies (Vercher et al., 2021). At the same time, approaching SI from the perspective of the local actors allows us to thoroughly explore their specific practices and discursive contexts.

(3) Finally, regarding the methodological dimension, the article highlights the potential of discourse methodologies to explore the articulation of SI and the abandonment of riverside landscapes in mountain areas, since this point of view give us the possibility of analyzing ideas, storylines and actors. Discourses are defined as “an ensemble of ideas, concepts and categories through which meaning is given to social and physical phenomena, and it is produced and reproduced through an identifiable set of practices” (Hajer and Versteeg, 2005, p. 175). Discourses build meanings and relationships and help to define a shared way of understanding the world, common sense and legitimate knowledge (Dryzek, 1997), playing a key role in the emergence, dissemination and evolution of innovation processes (Pedersen and Johansen, 2012). The relevance of the discourses lies in the fact that SI initiatives cannot succeed without introducing new and compelling ideas and storylines that encourage other actors to join them (Vercher et al., 2021). In addition, discourses have the ability to impact public policy (Schmidt, 2008). Research on SI narratives is scarce and focuses on the role of narratives in the governance of SI (Ney, 2014) and in processes of transformative change (Wittmayer et al., 2019). Only a few authors have paid attention to the particularities of narratives of SI in rural regions (Vercher et al., 2021), or to discourses in abandoned land studies (Frei et al., 2020; Sanz-Hernández, 2021a), so this methodological perspective becomes a significant contribution to the studies of SI and ALA simultaneously.

Consequently, further research is needed on the way actors influence and reproduce discourses in rural sceneries

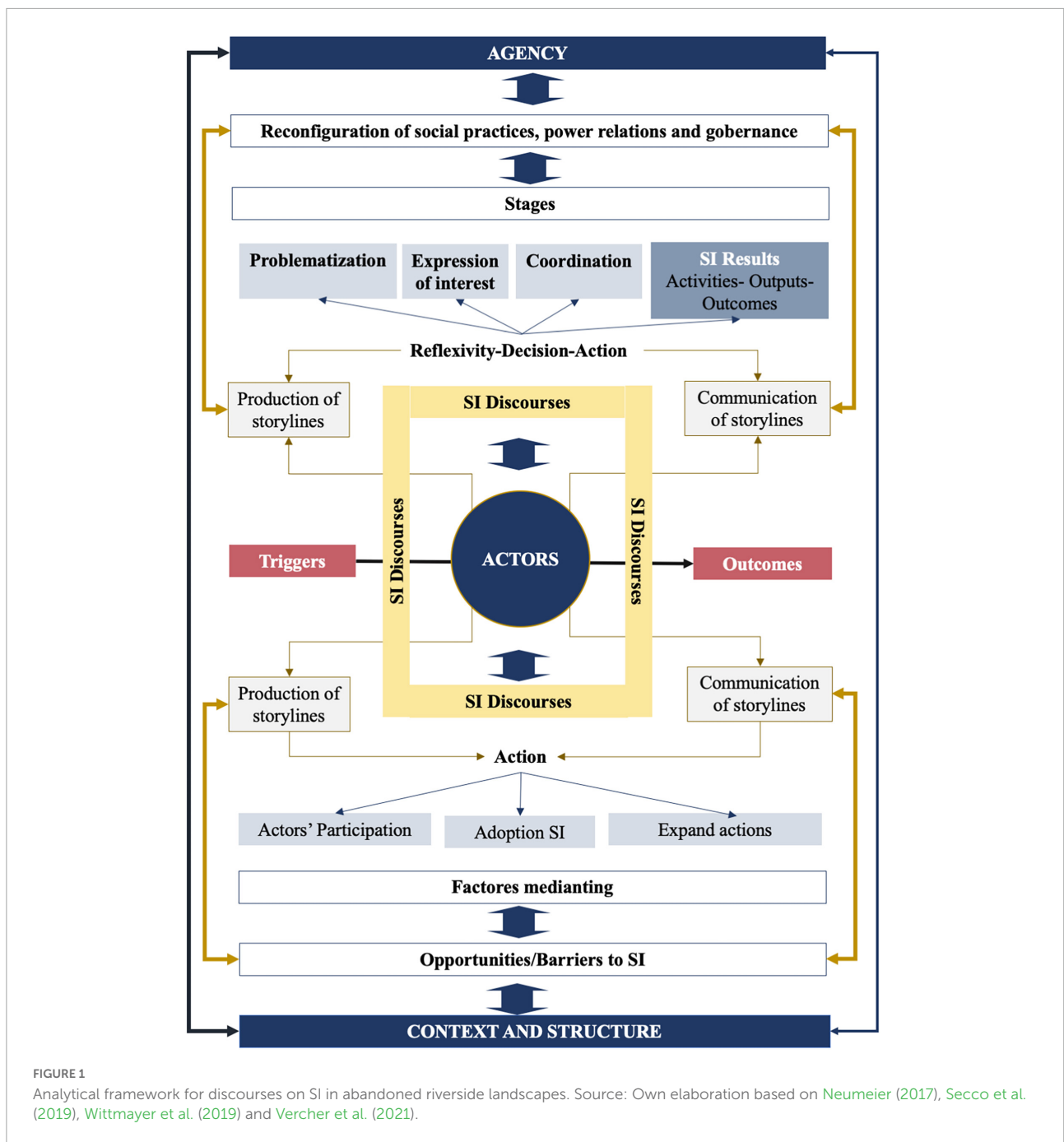
(Vercher et al., 2021) and, in that sense, this article seeks to address the above mentioned research gaps, taking as starting point an analytical framework on SI discourses adapted from Frei et al. (2020) and Sanz-Hernández (2021a), operationalizing it in order to provide empirical evidence in response to the following two research questions that connects ALA and SI, particularly in the context of riverside landscapes: (1) What kind of discourses on SI processes connected to irrigated land reutilization are present in rural areas? and (2) Which actors and storylines are influencing discourses on SI processes developed as part of abandoned land reutilization in rural areas?

In that regard, the article proposes, firstly, a theoretical framework that synthesizes the conceptual foundations of the proposal we make. Next, in the Section “Method and cases studies,” we present the methodological proposal that has been followed in the investigation. Section “Storylines and discourses on social innovation” shows the main results and their discussion, firstly analyzing the promoting actors and discourses storylines (the problematization of the cases analyzed, how and with what resources they began, the main results, mediating factors and barriers to SI initiatives) and, secondly, analyzing the main actors’ discourses. In section “Conclusion,” we expose the main conclusions.

## Analytical framework: Linking social innovation initiatives on abandoned land reutilization with discursive approaches

Social innovation, as we conceived it in our research, refers to “a structure-agency framework sustained by a theory of change that highlights the development of causal pathways from initial triggers and needs to final outcomes” (Vercher et al., 2021). This process starts when actors perceive some community needs and opportunities (Mulgan, 2006) and ends in subsequent outputs and outcomes (Figure 1). The results of SI depend, to a significant extent, on the perception of the actors (Wiesinger, 2009), their values (Sarkki et al., 2015) and their ability to reconfigure and implement new forms of governance, social and institutional practices and relationships among those actors; which will, eventually, lead to a change in social attitudes and behaviors (Sanz-Hernández, 2021a).

The first phase of SI is a process of reflexivity and decision-making around an idea perceived as a need or a problem and which acts as a trigger for the process. The idea takes discursive form and is reflected in stories and discourses about the meaning, orientation and times of SI. The reflective process that characterizes the initial phase in SI takes shape with a decision-making prior to taking action that, in the topic that we are dealing with, often implies a change of urban life for one in a rural environment. Decision-making is usually parallel



to the assessment of what resources are available and how to activate them.

The initial promoters of the idea (one or several people) gather around them a small number of people who contribute both the expert and experiential knowledge and the necessary impulse to make the initial idea a reality. The results of SI are not specified in a final product, but rather are developed during the process and are reflected in activities, outputs and outcomes.

The results of SI in riverside landscapes would be the last stage in a long process that begins with making a

need and a problem visible and should conclude with the incorporation of any successful innovative practice, which will bring about a change with respect to the previous state (i.e., recovery of abandoned land for sustainable development). Regarding the outcomes of SI, previous studies refer to positive impacts (Secco et al., 2019; Kluvánková et al., 2021) when it improves social, cultural or human capital, and negative impacts, when it constitutes a source of sociopolitical conflict, disempowerment of public structures, or redistribution of power between and within different sectors and between

stakeholders (Avelino et al., 2019). However, we could point out that an outcome is never completely positive or negative, as virtually any action is the result of a trade-off.

When analyzing the success or failure of SI factors in the “neo-endogenous” rural development, Neumeier (2017, p. 34) defines success as “the development of a new form of attitude, behavior or perception that shows a high rate of adoption.” This author distinguishes between two factors that determine the outcomes of SI: (1) mediating factors in the adoption of innovation, which includes the perceived advantage; and (2) barrier reduction factors, such as, for example, socio-emotional aspects, the previous history of collective action, or how SI is promoted and its consequences for actors’ participation.

Between the perception of the community need and the (more or less successful) results, there are several mediating factors (Figure 1), among which discourses play a key role. Following the perspective of Vercher et al. (2021) we see discourses as a critical dimension for bringing together actors, processes and activities in order to enable this theory of change.

In this sense, discursive approaches may be considered a relevant theoretical approach for an interdisciplinary perspective on SI since these approaches can provide a point of view that gives solution to the gaps regarding the role of language, ideas and power (Foucault and Gordon, 1980; Feindt and Oels, 2005; Hajer and Versteeg, 2005) as part of SI. Discourse analysis approaches are based on multidisciplinary theories, including the sociology of science, cultural studies, linguistics and language philosophy (Carpentier, 2012). There are several discursive approaches, such as Frame Analysis (based on Goffman, 1974), Narrative Analysis (Roe, 1994; Wittmayer et al., 2019), or Discourse Analysis—including two fundamental theoretical tendencies: Critical Discourse Analysis, which studies discourse as a form of social practice, and Argumentative Discourse Analysis (Hajer, 1995; Hajer and Versteeg, 2005) that draws on Foucauldian approach to discourse. Discourse Analysis underlines how language and ideas structure the ways we perceive reality and the power of discourse in legitimizing certain ways of thinking, speaking and acting at the expense of others (Isoaho and Karhunmaa, 2019). It is based on three analytical concepts: discourse, discourse storylines and discourse coalitions (Hajer and Versteeg, 2005). This approach helps to understand social change and sustainability transition issues that are complex, given their dynamics and uncertain nature.

Social innovation defines, as part of its processes, how society can be transformed and by whom. SI creates certain narratives and discourses of change that produce an identity and collective cohesion, guide actions and enable a reframing process of the perceived context and structure, according to the SI’s visions of the new alternative actors (Wittmayer et al., 2019). This process demonstrates the close intertwinement of narrative and practice, since the former provides ideas about alternative futures (Wittmayer et al., 2019). The narrative building may take

place in more deliberative or rather hierarchical ways and may develop individual and social identities by making significant efforts (dedicated to the development and communication of collectively shared worldviews), which has become a pre-figurative practice that appeals to imagination, in a process that, we can say, is closely related to perceptions.

There is profuse empirical evidence on the perceptions of individuals or social groups regarding the dynamics of change in landscapes and their social impacts (Cariola et al., 2018; Frei et al., 2020; Vuillot et al., 2020). However, few case studies have focused on identifying narratives about “cultures of land abandonment” (Soliva, 2007). Frei et al. (2020) identify three relevant discourses on land abandonment and sustainable management: rural fatalism, pro-management, and pro-nature discourses, and Sanz-Hernández (2021a,b) adds to this typology the pro-culture discourse. These narratives are associated to a different degree of perception of marginalization and viability (project), a different conception of what SI is and why it emerges (individuality vs. sociality/institutionality), as well as the possibility of reduction of barriers to SI. As we explain below, two of these narratives are built around (territorial or social) denialism and fatalism, and the other two are built around possibilism or the possibility of innovation for change.

Rural fatalism reflects the marginalization, lack of recognition, remoteness from political institutions and low confidence in the future (Frei et al., 2020; Sanz-Hernández, 2021b). The pro-management discourse is clearly in favor of the business management of local resources and expresses confidence in the possibility of designing future scenarios for rural development. In this case, there are two differentiated discursive storylines: one more focused on obtaining economic performance and the other more favorable to sustainable management of endogenous resources.

The third discourse, which we call “naturalism,” is a minority and would position itself in favor of non-human intervention in the evolution of abandoned landscapes and forests. It is a vision that makes the negative consequences of abandonment invisible and considers some positive effects of passive management to be favorable, such as the improvement of biodiversity and the connectivity of landscapes. The fourth discourse or “culturalism” emphasizes the heritage, identity, cultural and aesthetic value of landscapes. Sanz-Hernández (2021b) also distinguishes two different storyline discourses at this point: one is focused on safeguarding landscapes without modifying uses while the second one is open to SI. The pro-management and pro-culture discourses assume the notion of endogenous and sustainable development, which are focused on developing the socioeconomic potential of the region from the essential local participation (Soliva, 2007; Soliva and Hunziker, 2009), a particularly central issue in SI.

In line with these possible discursive tendencies, ALA has been indistinctly seen by some actors as a problem or an opportunity that deserves a response, defining new

social practices (Secco et al., 2019), that would be associated to the emergence of SI initiatives. Discourses allow us a methodological approach to ALA and its possible articulation with SI processes.

## Method and cases studies

We have adopted an interpretive approach based on a multiple case study with a qualitative methodological perspective (Patton, 2002; Lichtman, 2014), because further important challenges and barriers to SI initiatives for the land reutilization are located in specific territories and communities. This study provides new empirical evidence for both SI in rural areas and actor's discourses at the land-use agent level, an underexplored topic of research (Pazúr et al., 2020). The selection of the cases to be analyzed is the result of a process that began with the selection of the contexts (Stage 1) and continued with the selection of the sample (Stage 2), data collection (Stage 3) and data analysis (Stage 4). The complete process, which is explained below, allows us to follow a coherent methodology of research, in order to construct the object of study as a result of an integral procedure of subsequent approaches.

### Stage 1. Selection of contexts

In the European Union (Andronic et al., 2020), it is estimated that 30% of agricultural areas are at risk of abandonment. It is predicted that, by 2030, 3% of European agricultural land will be abandoned. Currently, Spain is the European member state undergoing the worst land abandonment situation, given that it is estimated an abandonment average of 5% (23 million ha), two points over the EU average forecast (Perpiñá Castillo et al., 2020).

This study has been conducted in the province of Teruel, a Spanish rural and mountain area with poor accessibility, limited access to basic services and infrastructures as well as a low population density. Moreover, Teruel is affected by a continental Mediterranean climate and its average altitude exceeds 1,000 meters. In terms of absolute figures, Teruel is among the provinces with the largest ALA areas in Spain (above the Spanish average of 30 Kha) (Perpiñá Castillo et al., 2020).

In Teruel, 11.35% of the cultivated area is irrigated by both traditional riverside irrigation methods around the nine most relevant permanent natural rivers (Huerva, Gallo, Jiloca, Guadalope, Turia, Matarraña, Aguasvivas, Martín, and Mijares) (Figure 2) and by the so-called new irrigation systems, close to reservoirs and swamps. The main agricultural land use in the riverside landscapes of the province (Figure 3) is the cultivation of cereals (especially barley and wheat), fruit trees (especially almond and peach trees), fodder (alfalfa) and olive groves. In a previous study (RegATeA project), we have identified

71,789 plots within riverside landscapes without productive management (30% of traditional irrigation in the province).

For the selection of the contexts to be analyzed, three aspects have been taken into account: the percentages of abandoned land, the number of abandoned plots and the major area per plot (Table 1 and Figure 3). The highest rate of land abandonment is observed in the territories that belong to the Mijares and Martín rivers. The Martín, Turia, and Mijares basins comprise the biggest number of abandoned plots. The irrigation areas (ha) that lack productive land management are in Martín, Turia, and Guadalope basins. Finally, Jiloca and Guadalope are the two irrigation areas where the area per plot (ha/plot) is greater. This is relevant for the study, since we would like to explore the discourses on SI in those areas with better conditions for the abandoned land to be reused (number and size of areas). Besides, selected basins amount to 87% of the plots prone to land reutilization.

### Stage 2. Selection of sample

The sample consisted of 32 informants who were selected using purposeful sampling (Suri, 2011). The network of informants included the main actors related to the management of riverside landscapes: owners and descendants, members of social entities (cooperatives, associations or irrigation communities), representatives of the regional, provincial and local administrations (politicians and technicians) and experts (Table 2 and Appendix).

The final sample was drawn through a continuous iterative process whereby we moved back and forth between the literature review, the sampling, data collection and analytical phases, until data saturation or lack of relevance was reached (Mason, 2010).

### Stage 3. Data collection

The methodological strategy of conversation and narration (Valles, 1997) was chosen for data collection, since we considered that it was the best way to access the subjects' perspective, and capture their perceptions, narratives and discourses (Kuntz et al., 2018; Wittmayer et al., 2019; Frei et al., 2020; Vuillot et al., 2020; Sanz-Hernández, 2021b).

The interviews were carried out between February 2021 and February 2022. Two interview research methods were specifically devised and employed with different actors, at different times and conditions: the "walking interview" (Evans and Jones, 2011) and the face-to-face semi-structured interview. For each of the groups of interviewees, a specific interview script was prepared, all containing the relevant informative aspects: land abandonment perception, perception of possible land-use strategies, and opinion on opportunities and barriers of implementation of SI in the territory.

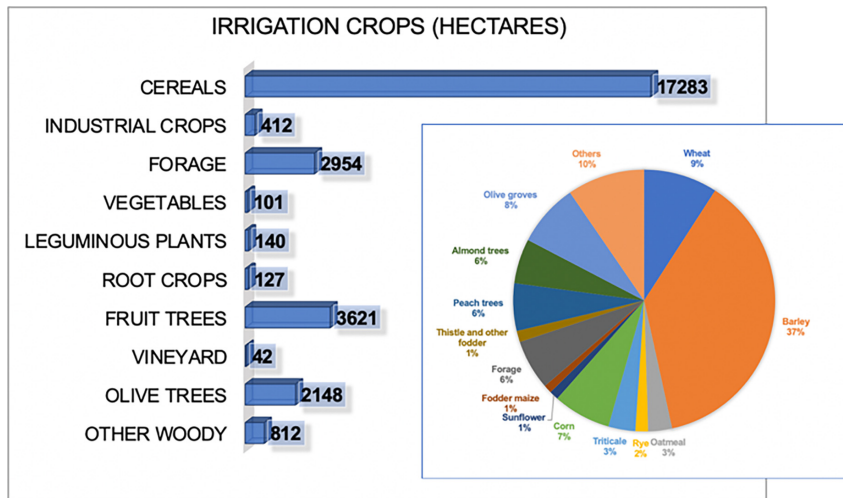


FIGURE 2 Irrigated crops in the main riverside landscapes of the province. Source: Own elaboration based on data from the Ministry of Agriculture, Fisheries, and Feeding (Agricultural Statistics, 2020).

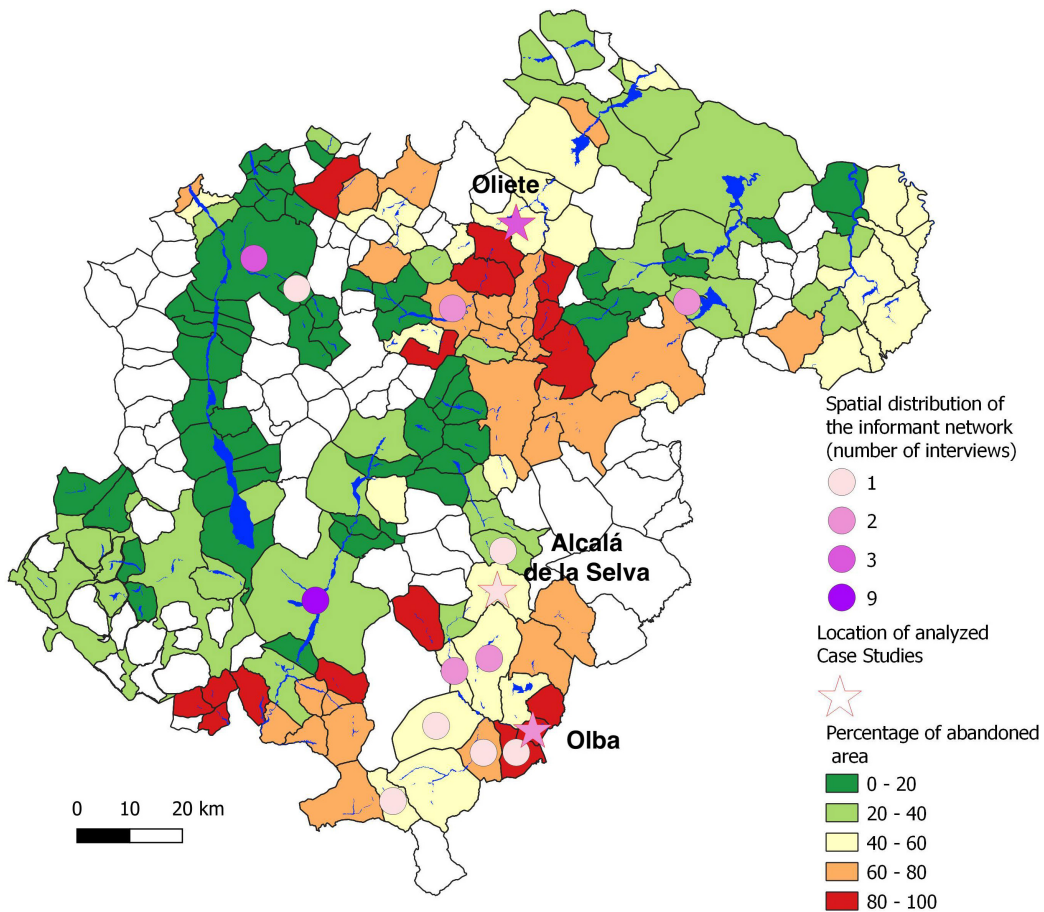


FIGURE 3 Spatial distribution of informant network, location of case studies and percentage of abandoned areas. Source: Own elaboration based on RegATeA Project. <https://regatea.cita-aragon.es>.

TABLE 1 Number of plots and area with and without productive management in the nine rivers of the province.

Basin	Number of plots with some area without productive management	Area without productive management (ha)	Area with productive management (ha)	Area without productive management (%)	Average area/plot without productive management (ha)
Huerva River	279	19.54	353.66	5.24	0.0700
Gallo River	94	6.55	57.90	10.17	0.0697
<b>Jiloca River</b>	<b>4,162</b>	<b>991.53</b>	<b>6,439.26</b>	<b>13.34</b>	<b>0.2382</b>
<b>Guadalope River</b>	<b>7,268</b>	<b>1,209.59</b>	<b>3,282.68</b>	<b>26.93</b>	<b>0.1664</b>
<b>Turia River</b>	<b>16,576</b>	<b>1,384.67</b>	<b>3,365.56</b>	<b>29.15</b>	<b>0.0835</b>
Matarraña River	2,816	409.44	821.72	33.26	0.1454
Aguasvivas River	3,850	283.46	444.83	38.92	0.0736
<b>Martín River</b>	<b>13,833</b>	<b>1,415.66</b>	<b>2,051.82</b>	<b>40.83</b>	<b>0.1023</b>
<b>Mijares River</b>	<b>8,337</b>	<b>839.35</b>	<b>696.10</b>	<b>54.66</b>	<b>0.1007</b>
<b>TOTAL</b>	<b>57,215</b>	<b>6,559.81</b>	<b>17,513.53</b>	<b>27.25</b>	<b>0.1147</b>

Source: RegATeA Project. <https://regatea.cita-aragon.es>.

Bold values are corresponding with selected basins information in this study.

During the fieldwork, three SI initiatives were identified, which were analyzed in greater depth through a semi-structured interview to the promoters of the SI initiatives, documentary review of media discourses and other gray documents. The main characteristics of the SI initiatives detected are presented in the **Table 3**.

All the interviewees gave their informed consent to the researchers, after being explicitly informed that their statements and the data provided would only be used for research purposes, preserving their anonymity.

## Stage 4. Data analysis

The interviews were recorded, transcribed and analyzed using an open and simultaneous coding method (supported by the literature review) through the MAXQDA software. The similarities, differences and interactions between the interviewees' responses were analyzed, focused on three relevant thematic areas: the interpretation of the causes of the abandonment/deterioration of riverside landscapes, the possibilities of SI implementation and the barriers to its success. In the analytical phase, the discourse differences of the actors on SI in riverside landscapes for the recovery of abandoned land have been the main issue to be analyzed.

## Results and discussion

Interviewees include in their discourses both the current state of the riverside landscapes and the future scenarios of innovative management and opportunities for the territory. Furthermore, in the discourses of the actors of SI initiatives, it is possible to identify relevant aspects about why, where and when they take place; how they have been developed; who has

promoted them; its main results, as well as the barriers to SI and future opportunities for territory.

## Storylines and discourses on social innovation

Discourse elements on SI can be arranged in two main storylines in the territory, one that is linked to the impossibility of SI in the territory (negationism) and another possible and optimistic discourse. All the analyzed cases of SI produce and communicate possibilistic discourses.

### Denialist discourse and rural fatalism

This discourse is not present in any of the three SI initiatives identified, but it has a strong presence in the interviewees from other areas where experiences that we could consider cases of SI have not been put into practice. In this regard, it is relevant to briefly examine the main characteristics of this discursive tendency, in contrast to the discourses of the subjects who have developed SI experiences as a response to the abandonment of land in riverside landscapes.

In the case of these individuals, who have not developed SI initiatives in their respective territories, a high degree of marginalization and a low degree of viability are combined with the explanatory relevance of the territorial and social (internal) variables and the obstructing institutional (external) trajectories. It is a narrative of hopelessness (Reg\_03, 07, 10, 11, 12, 22), in which the lack of local actors' interest in fostering innovation in the territory leads to the inevitable consequence of finding it difficult to attract external actors and impossible to relieve agroforestry occupations. Therefore, the possibility of innovation is denied: "Not here, it is impossible" (Reg\_03), is lessened.



TABLE 2 Sample distribution.

	Actors							
	Landowners		Civil society		Administration		Academy	
	Individual initiative	Collective Initiative	Associations and cooperatives	Irrigation community	Technicians	Politicians (local level)	Provincial and regional level	University and research institutes
River basins	Mijares	Reg_10 Reg_09 Reg_02	Reg_14	Reg_01	Reg_06 Reg_30	Reg_05 Reg_15	Reg_07 Reg_08 Reg_11 Reg_18	Reg_16 Reg_23 Reg_24 Reg_25
	Martín		Reg_26 Reg_28 Reg_32	Reg_03 Reg_29	Reg_04	Reg_27		
	Turia	Reg_21	Reg_20					
	Guadalupe	Reg_13	Reg_12					
	Jiloca	Reg_17	Reg_22		Reg_31	Reg_19a		

Source: Own elaboration.

The negationist perception is not only associated with rural fatalism, but also with a productivist mentality where economic sustainability is the most important dimension. Most of the interviewees have remained skeptical about any alternative management in the abandoned riverside landscapes because they are convinced of the lack of productivity of the plots, in a context of decline in the agricultural sector and the lack of prospects for the effectiveness of agricultural policies. Due to the precariousness of the sector, agriculture has slipped into the background and become an income supplement, which has discouraged professionalization in the sector and promoted a model of small-scale agriculture that is in sharp decline. This narrative is especially evident in the discourses of actors with a high perception of marginalization. They tend to reside in the regions that have the biggest number of abandoned lands, and the highest rate of depopulation, but we have also found them in interviewees from areas being more territorially integrated (mainly because of their proximity to urban areas, markets and services).

In this case, they distrust not so much the conditions of the territory as the agents to carry out SI (social denialism). These cases are presenting less perception of marginality (in line with better population figures, better socioeconomic situation and less abandoned land), but question the success of SI in revitalizing riverside landscapes. The perceived hindering factor is both individual (the owners' lack of interest and commitment and lack of interest in change) and structural (legislative framework on the right to use of—and benefit from—the land).

This discourse shows certain social fatalism or distrust of the individuals and groups that should lead the processes of change and recovery of the abandoned land. Whether due to the interests created around the rights and uses of the land, or to individualistic attitudes that stop cooperation, immobility and individualism are behind the negative perception of the possibility of innovating.

### Discourses of the possible: Entrepreneurship, nature and heritage

In contrast to the negationist and pessimistic discourse of the individuals who are not linked to SI initiatives, in the case of the interviewees who have developed projects of this nature, we find a discourse that highlights the confidence in the possibility of positive results. It is a discourse that has been constructed and is communicated at the same time and it permeates its surroundings and reconfigures social practices and relationships. “We made the impossible possible, because we did not know it was impossible. (. . .) We were not obtuse with how it had been done until now. We were guided by passion and selfless will” (Reg\_26).

In the first place, the possibilistic narrative is linked, above all, to an economic-managerial approach, which sees possibilities of greater integration of the territory in the current socioeconomic dynamics and therefore considers SI processes as

TABLE 3 Cases study on SI in abandoned riverside landscapes in Teruel (Spain).

Social innovation cases study			
Location and river basin	Spain, Aragon Autonomous Community, Teruel province: - Gúdar-Javalambre region - Municipality: Olba - Mijares River, Mijares river basin	- Gúdar-Javalambre region - Municipality: Alcalá de la Selva - Alcalá River, Mijares river basin	- Andorra –Sierra de Arcos region - Municipality: Oliete - Martin River, Martin river basin
Characteristics of the territory and irrigated Riverside landscape	- Altitude, (height above sea level): 660 m. - 20.99 km <sup>2</sup> (Surface area Olba) - Irrigated Riverside landscape, 84.35 (ha) - Abandoned irrigated area in the Mijares river basin: 54.40% - Abandoned area in Olba: 93.8% (1,599 plots)	- Altitude, (height above sea level): 1,404 m. - 104.95 km <sup>2</sup> - Irrigated Riverside landscape, 43.32 (ha) - Abandoned irrigated area in the Mijares river basin: 54.40% - Abandoned area in Alcalá: 36.7% (373 plots)	- Altitude, (height above sea level): 542 m. - 86 km <sup>2</sup> - Irrigated Riverside landscape, 43.32 (ha) - Abandoned irrigated area in the Mijares river basin: 41.15% - Abandoned area in Oliete: 39.9%, (2,243 plots)
Demographic characteristics	- Population: 264 hab. - Density (inhabitants per km <sup>2</sup> ): 10.81	- Population: 352 hab. - Density (inhabitants per km <sup>2</sup> ): 3.52	- Population: 340 hab. - Density (inhabitants per km <sup>2</sup> ): 4.15
Social innovation details	- The attractiveness of the riverside landscape contributed to the decision of the new settlers. - Implementation of an educational project focused on the connection with nature to avoid the closure of the only active school in the area. - As a result, there was considerable population growth which prevented the closure of the school and contributed to the repopulation of the territory. - There are several associations in the region of Gúdar-Javalambre in charge of protecting the river Mijares, both for its environmental, landscape and social contributions.	- Land seriously affected by depopulation and employment opportunities. - Business project dedicated to the direct sale of organic and local beef. - Its objective is to respect the tradition of the production process, but updating the techniques used with a more respectful approach and improving quality. - Its objective is the recovery of agricultural and livestock activity with a circular bio-economical model of bovine livestock farming that benefits the sector of the territory. - The territory offers very favorable grazing conditions thanks to its proximity to the river, which also contributes to the fact that its promoters have also wanted to recover the irrigation community.	- A project designed to rescue abandoned olive grove land. - Its aim was to attract donors to sponsor olive trees by relying on new communication technologies (ICT). - The project has stimulated a sustainable economy and attracted a large amount of tourism, creating a great social impact in a village at risk of disappearing. - They have a cultural park on the Martin river, a very important and protected tourist resource. The river is an identity resource.

Source: Own elaboration.

another entrepreneurial formula for rural development. Within possibilism, some interviewees perceive the marginalization of the territory but not display a sense of victimhood; these actors are in spaces with greater internal recognition of weaknesses (that is, with greater self-perception of marginalization) and comes from groups that recognize and emphasize the risks and negative effects of land abandonment, as well as of absenteeism and detachment from landowners. These are mostly external actors who have initiated actions after settling down in these regions and who do not always have all the traditional knowledge or the understanding of the local actors. This narrative is also expressed by landowners who have an increased awareness of ownership and rootedness, as well as by public administrations, professionals and academics, which is in line with other previous empirical studies (Sanz-Hernández, 2021a,b).

Concerning the narratives that revolve around the economic performance, two trends when assessing the drivers of change in the area have emerged. On the one hand (Reg\_04), there is trust in management alternatives, such as parcel concentrations or land banks, to the extent that they mitigate investment risks for people who wish to enter the agricultural sector. To this end,

however, public investment is necessary to start in this sector. These measures are adopted because actors themselves agree with the transfer of their lands. On the other hand (Reg\_05, 09, 19), more entrepreneurs are needed in the territory to develop new forms of revaluation, because there is no trust in the capacity of local actors when it comes to innovating in the uses of the land, nor in their support and participation when giving up the use of their lands (Reg\_09).

In a general sense, the positive discourses in relation to SI put the collective sense at the center. At the collective level, there is a clear connection with the territory and the community, giving value to the local dimension. The subjects underline the importance of the sense of belonging and rootedness in the territory, as key elements in the implementation and development of SI experiences. In the ecological livestock experience of Alcalá, the person with no ties to the area joined the initiative from the beginning precisely “because my partner has that attachment to his territory” (Reg\_09). In the three initial promoters of the “Sponsor an olive tree” experience in Oliete, this sense of belonging to the territory is also evident in the discourses and it is considered the initial impulse of the project and the articulating dimension of the group that initiated the

experience. The originators of this initiative of SI declare that, precisely, they have not been able to grow up in the town because of the rural exodus that the territory has experienced: “we have not grown up in the town, but we are children of that rural exodus” (Reg\_26).

Previous studies have drawn attention to the importance of collaborative action and collective sense as key prerequisites for the success of any SI initiative (TEPSIE, 2014). This trend may be more decisive in territories with negative demographic change (cited by Neumeier, 2017, p. 37) where the population is aging, a trend that is difficult to be compensated by the action of other actors. The contexts analyzed where SI is occurring are characterized by: (1) a greater heterogeneity of actors, both in their backgrounds, know-how and interests (Rogers, 1995); (2) a strong feeling of belonging and an active attitude; and (3) SI has emerged from individual or small group initiatives betting on sustainable rural entrepreneurship. We have not found any initiative led by the public administration.

These possibilistic discourses in relation to SI also revalue the notion of rootedness. It is an individual aspect, but it has a close relationship with the sense of community and with how individuals perceive the capitals of their environment (Kanti Paul et al., 2020). The study shows that, despite the contextual limitations which are similar in all the cases analyzed, striking a proper balance between the human, social, political, financial, built, natural, and cultural capitals (according to the CCF model of Flora and Flora, 2004) and a sustained place-attachment can increase SI, by also influencing residents' decision not to migrate. This finding opposes the widespread contention of rural migration and supports non-migration, in connection with the creation of frameworks for SI. In this sense, we could state that greater rootedness or place-attachment to the territory of individuals is linked to the presence of more positive perceptions (cultural capital) of the possibilities of success of SI and, consequently, with a greater balance of capitals, both individually and collectively.

### Social innovation initiatives, entrepreneurship and pro-management discourse

The pro-management discourse appears with different intensity in the three cases. It is clearer in Alcalá and Oliete.

The Alcalá initiative arose from the idea of three veterinarians, one of whom had a decade of experience working in the province of Teruel. It was introduced in Alcalá de la Selva (in Mijares river basin), and has endorsed the recovery of agricultural activities within the framework of a circular bioeconomy model, linked to cattle and pig farming. A company for the direct sale of organic beef has been created, whose goal was not only to respect tradition in the process, but update the techniques used and seeking an increase in product quality. From a pro-management perspective, this initiative seeks “not only to work the land, but also to manage it” (Reg\_09). This SI initiative is considered the result of a completely personal

motivation. The starting point was the desire to live in the countryside and seek a way of subsistence compatible with a more peaceful life. Furthermore, it seeks to offer more sustainable, local and ethical business models. In this sense, “the three of us have created a company to distribute that meat directly to the consumer (.). And also an agricultural company to make food for these animals” (Reg\_09).

The Oliete initiative was designed to rescue the abandoned lands in some areas of the Martín river basin. Its promoters have endorsed the initiative “Apadrina un olivo” (“Sponsor an olive tree” in English), whose purpose is to recover the abandoned olive groves in the village of Oliete, and have encouraged individuals to sponsor olive trees. This idea emerged from a group of people, some of them were villagers' descendants, who, faced with the abandonment of the olive groves, decided to create an association, which is currently an entity of public utility. The main aim is to preserve and stress the importance of (hand in hand with ICTs) more than 1,00,000 abandoned trees. Donors, farmers and the entire town have contributed to setting this project up, which has stimulated a sustainable economy and created great social impact on a village at risk of disappearing. From a pro-management point of view, a sustainable rural development is sought, “looking for the custody of the territory and the recovery of the biodiversity of degraded areas” (Reg\_26). Despite not having been raised in the village, the promoters of this initiative have a strong sense of belonging and wish to contribute to its development, through a project that is economically and environmentally sustainable.

These two initiatives share an ethical business discourse, built on three fundamental ideas: (1) the “care” of the environment (land, animals), which is considered more than a productive resource, so discourses include the notion of reconnection with nature and therefore environmental sustainability; (2) the connection with the territory and the community (giving value to the local dimension) and putting social sustainability at the center; and (3) a more direct relationship with customers, reducing the role of intermediaries and distributors. All of them establish in their principles the need for new ways of producing and consuming and the relevance of local markets and self-sufficiency.

In this sense, hope for change lies in the arrival of new residents to the rural areas, who are recovering the use of small-scale orchards on small irrigated land, which may be beneficial when resuming the trend of contributing from a local business. For instance, agriculture and beekeeping offer productive alternatives (Reg\_19). However, for these alternatives to be successful, it is important that the new residents who settle down in the area contribute not only to making profits but also to increasing population levels and being more committed to the territory (Reg\_19), as is happening in both Olba and Oliete.

Other interviewees have a very low perception of marginalization, high motivation and a high self-esteem of the territory and the capacities of its population. They

communicate a discourse clearly in favor of the management of riverside landscapes that is produced, above all, by public administrations, entrepreneurs and academics. It is the vision that shows more confidence in the possibility of projecting future scenarios around riverside landscapes where SI can be successful. In that sense, two different storylines are recognized: (1) one more focused on the possibility of agricultural and livestock exploitation of the land, and (2) another that favors sustainable management based on economic diversification, i.e., diverse uses of the land, through educational or recreational activities, such as tourism, hiking, bike routes, and hunting use. The sustainable management storyline predominates in the three cases of SI analyzed.

### Social innovation initiatives and pro-nature discourse

Nature is at the center of the pro-nature discourse. Although all the discourses on SI analyzed include the idea of reconnecting with nature, there is a minority discourse that supports the European trend of valuing the re-greening of these areas. Naturalism shows complacency for spontaneous and natural forest growth in landscapes. Partly because of the complexity for recovering most of the abandoned land due to the excessive growth of vegetation and partly because of its environmental advantages, some interviewees (Reg\_02, 14) without experience in the agricultural sector have assumed the naturalism discourse, defending the non-intervention. It is a vision that makes the negative consequences of abandonment invisible and that highly regards some positive effects of passive management or abandonment itself (for example, the improvement of biodiversity or the connectivity of forests). This vision has influenced recovery strategies and highlighted those that take advantage of natural values and processes: “We would like to have everything under control and with no change, but the world does not work this way” (Reg\_02). Following this line of thought, some interviewees have suggested to promote riverside forests, not with the sole aim of enjoying or exploiting abandoned riverside landscapes, but for getting land environmental benefits.

### Social innovation initiatives, heritage and pro-culture discourse

The culturalist discourse (pro-culture) reinforces the heritage value of riverside landscapes and prioritizes the safeguarding of cultural and aesthetic values of landscapes. This discourse has a strong presence in all the SI experiences analyzed and is especially relevant in the case of Olba. This initiative was set up in the Mijares river basin with the arrival of new residents in the 90's. Developed in the municipality where there is more abandoned land, the promoters of this initiative have proposed to recover the orchards. However, in addition to the process of recovering abandoned land, another goal of the actors in this SI experience has been the prevention of the closedown of the

only active school in the area. This project focused on nature-connectedness, proposing an educational system whose purpose is to strengthen the relationship with nature. They “want to educate their children in rural areas” through “an innovative educational project with an organic garden” (Reg\_01).

They are interested in preserving agricultural cultural heritage before it is lost with the disappearance of the older generations (Reg\_01, 18). Currently, the Common Agricultural Policy is fostering a greater professionalization in agriculture, more linked to modernized organic production and technological advances, which implies the loss of a more traditional agriculture. This narrative underlines the idea that not enough use is made of the resources of the territory and that its cultural attractions must be enhanced. A possible future perspective is held, but the ability to create a local business with quality products that revives the territory is needed. This approach stems from the desire to have job opportunities and increase services that can help to attract population to the area in the future.

The abandoned irrigated land thus becomes a relevant element that responds to how to carry the SI forward, with a variety of purposes: repopulation, custody of the territory, sustainable production and consumption, changes in lifestyles, reconnection with nature, and so on. In this regard, water and land are not seen as mere productive resources. All the discourses put the river in a central place as an important identity device (especially in the case of Oliete and Olba). For example, the attractiveness of the riverside landscape contributed to the decision of the new settlers in the Mijares' basin. The Martin River gives its name to the region, and a Cultural Park was created around it in 1995, a very important and protected tourist resource. The way in which the river is perceived conditions the management and reuse systems of the territory.

### Social innovation actors

In none of the cases, the promoters of the initiatives were initially owners of the land, so access to its use (or its purchase) is a mediating factor for the success of SI initiatives. In the case of Alcalá, the promoters developed a company that bought land and also intends to reuse other abandoned ones, an action that in many cases faces the lack of knowledge of who its owners are. In the case of Oliete, the owners are being mobilized to promote the reuse of the land with local marketable crops. In addition, a women's cooperative has been created for its development. As has been pointed out, this initiative was constituted as an association of public utility, resorting to the figure of “custody of territory,” which allows them acting “with a non-economic desire, but to maintain that heritage (.), since the disappearance of the olive trees due to the abandonment of the land affects us all” (Reg\_26).

All the promoters of these three initiatives come from an urban environment and have settled in the towns. In the case of Olba, the SI promoters had been endorsed by people who were not born in the municipality; they mostly resided in the cities and settled as new residents in the locality. In the case of Alcalá and Oliete, some of the developers have family ties to the town; in fact, these actors show a strong feeling of belonging to the territory and they look forward to making a living out of it. The individuals who are encouraging innovation perceive themselves as promoters of mindset shifts and as key players in the recovery of the territory (Reg\_09, 16).

It should be underlined that all the interviewees declared themselves committed to the territory and SI initiatives, assuming full responsibility for them. In their discourses, the metaphor of the “grain of sand” is recurrent, an expression that points to the relationship between individual and collective contributions, offering a vision that underlines the need for collective action—that brings together the individual actions—as a solution. “Our dream is to live in this town and live off the land and contribute our grain of sand to fight against depopulation” (Reg\_09). In this sense, the interviewees have explained that their response is intended to be part of the “solution” to budgetary cuts, the substitution of services financed with public funds, as well as the need to assume responsibilities and tasks previously carried out by a greater number of local actors.

These actors are new inhabitants who have investment capacity, training, new ideas and the desire to settle down in the territory. In contrast, some of them believe that local actors are more reluctant to change and regard them as obstacles that hinder the development of these SI initiatives due to, on the one hand, their passive attitude when participating, and on the other hand, their more critical attitude toward the proposals of those considered as foreigners. The attitude of the local population is widely perceived as negative, since a possible recovery of the territory does not seem feasible for them, despite the fact that new inhabitants consider them as the group that can benefit the most and contribute to the project (Reg\_14). However, these interviewees also consider that the passivity of many people is not a consequence of a lack of interest, but a result of their lack of capacity due to their advanced age (Reg\_09).

The promoters of these SI initiatives have a clear profile of entrepreneurs, with a strong idea and the purpose of succeeding in the initiative. In addition, they are aware of their role as mobilizers of other individuals and have the clear desire to become role models and to inspire other people. In this sense, they recognize that “there is a pull effect, right? We have also wanted to do that; by going to live there, we can attract couples like us” (Reg\_09). The name given by the promoters of “Sponsor an olive tree” to an initiative that they have developed as part of the project—“Despertadores Rurales” (“Rural alarm clocks” in English)—demonstrates the sense of mobilization that they attribute to their actions.

One aspect to be underlined is the presence of women among the precursors of these SI initiatives. In all cases, they sought to move to the territory in search of a more rural area to live in and have developed projects aimed at ensuring their permanence in it, betting on sustainable rural development. In the case of Olba, the school initiative was implemented by a teacher from the center and in Alcalá the project arose from the hands of two men and a woman. Finally, in Oliete, the initial pioneers were also three, including a woman. All the initiatives have two factors in common: the stimulation of more sustainable economic activities on the land and the desire to offer a benefit beyond the individual. We also find common elements in the discourses of the three women who are among the promoters of these initiatives, specifically, the link and desire to expand both social and environmental benefits in an integrated manner.

On the one hand, social contributions to the territory are understood beyond generating job opportunities or establishing population. In this sense, participation issues take on greater prominence and the three projects seek new forms of collaboration, cooperation or participation between actors. In particular, the case of the educational project in Olba is valued in the territory for having reinforced the mechanisms of participation of families in the school and for its search for more horizontal decision-making. In the case of Alcalá, new forms of collaboration have been sought between the different agents dedicated to the production of beef in the territory and thus strengthen the sector as a whole. Lastly, in Oliete, they have taken advantage of the opportunity offered by ICTs to link foreigners emotionally and physically with the territory.

We also find a similar discourse alignment in relation to education. Aside from the Olba case, the other two women actively participate in the educational centers of the territory; one of them was personally involved to prevent the closure of the school in Oliete, although without success. The pioneer woman of the SI initiative from Alcalá is trying to introduce initiatives linked to nature through school gardens, in line with what was proposed in Olba. Two of them (Alcalá and Olba) refer to the need for a different education that values the environment.

The way to achieve the objectives is also relevant. In the Gúdar-Javalambre region in particular, truffle cultivation is being developed notoriously due to its high profitability, even in irrigated areas (Reg\_15). However, two of the women precursors of SI initiatives (Olba and Alcalá) speak out against monocultures and insist on the importance of crop diversity for its benefits for the environment at the level of biodiversity as well as for the risk it implies in case of pests or crop problems. Economic profitability is put here in the background, prioritizing the environmental needs of the territory.

In line with previous studies (Hempel et al., 2019), our results indicate that the discourses of women that are pioneers of SI emphasize the need to learn to coexist with nature, understand its processes and needs and adopt a position

of responsibility regarding its care. However, to determine whether these differences are due exclusively to gender issues, a comparison should be made with SI initiatives promoted by men, which, moreover, are aimed at sustainable processes and in territories where material and social resources are scarce.

However, regarding this issue, it is relevant that the discourse of the women linked to these SI initiatives is notably far from the generalized perception of the rest of the interviewees in which a productivist vision of the land predominates and it is pointed out that the mechanization difficulties and profitable productions were important motivations for the abandonment of land (Reg\_17, 18, 21). This vision of land uses can limit other ways of rethinking the territory and its management. In that regard, women can play a key role by not having such a dependent or demanding vision of new technologies and not prioritizing land uses exclusively based on their profitability.

## Barriers to social innovation and future opportunities for territory in the social innovation discourses

In the three cases analyzed, the discourses have an orientation toward the future and in general, they show self-confidence to be successful in SI. However, they also recognize barriers and difficulties in the SI process mainly related to participation actors, resources (material and strategic) and conditions to expand SI (Figure 4).

Social innovation promoters and other interviewees refer to two types of factors that condition SI initiatives, and that can be grouped into two dimensions: (1) decisive factors of a socio-psychological nature, and (2) determining factors of a structural, institutional and political nature.

First, regarding the socio-psychological conditioning factors, interviewees have suggested that the main and necessary success factor of SI has a particular individual character. These individualities bring together the relevant barriers that are associated with individual and sociocultural traits that owners, above all, and people who can oversee the introduction of SI initiatives share. These factors operate in the different stages of the SI; and their relevance increases during the first stages.

All the interviewees have revealed that the main and necessary (but not sufficient) condition for SI is that people are willing to undertake the initiatives and to face the risks associated with their actions. The three cases of IS analyzed involve relevant personal decisions (for example, the change from the city to the rural environment), although all of them are not necessarily risky from an economic point of view.

All SI initiatives imply lifestyle changes associated with the search for new places to live, the generation of new occupations or new ways of developing one's own profession. The reflective process that frequently appears in the SI initial

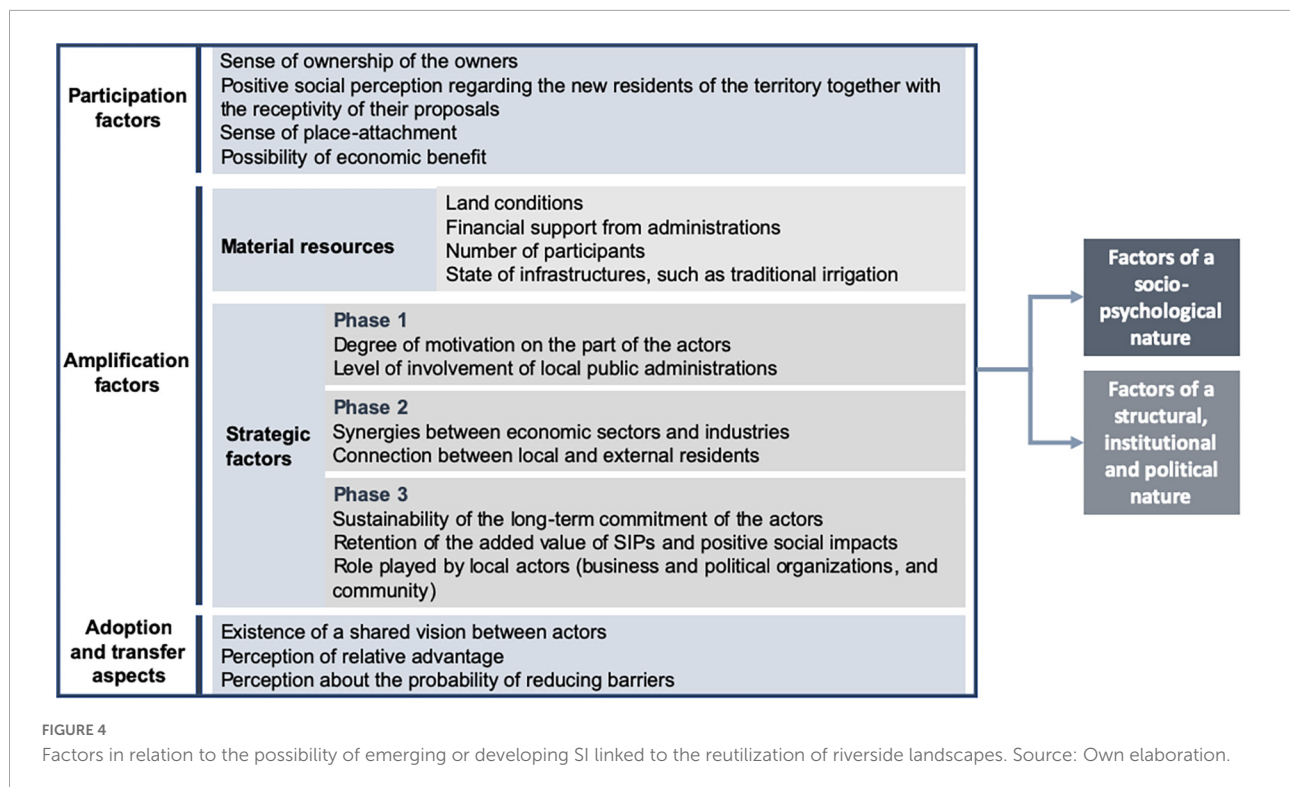
phase (Figure 1) is specified in these cases with a prior decision-making, such as a change of life from an urban environment to a rural one. Sometimes the discourse (Alcalá, Olba) reflects the rejection or strangeness of the local population and the desire to start a new life is not always well understood, neither by the urban population nor by the rural environment itself. Discourses on SI usually contain arguments at this point that sometimes highlight rationality in decision-making and other times recognize foolishness and naivety armed with affectivity and emotions. In this sense, on the one hand, in some cases it is pointed out that “we have not come to the town because it was our only option. We have traveled, we have lived for 10 years in different countries and finally we have decided to return to Spain close to our family. It's a choice.” (Reg\_09) While, on the other hand, other interviewees underline that “in a passionate and disinterested way (.), this is a project closely linked to emotions” (Reg\_26).

The initial objective of breaking with previous paradigms, in what refers to the rural and its economic management, aims to demystify or change old ideas about production, showing that “another production model can be put into practice in a more sustainable, more local and quality way” (Reg\_09). In this sense, the emotional dimension plays a core role in in these processes of rupture, since the interviewees refer to the “small initial contribution” they wanted to make to their territories, “in a more passionate and selfless way” (Reg\_26).

The riskiest initiatives, such as “Sponsor an olive tree,” show the tension between the emotional and rational dimensions of entrepreneurs is stressed, and they must be willing to start the initiative even without getting paid and meet the challenge of performing risky personal actions, for example in economic terms. They had almost no resources or knowledge at the beginning: “We were deluded young people who were outside the sector, outside the market and did not know the production” (Reg\_26).

There are a group of barriers related to strategic resources, such as the degree of actors' motivation, their willingness to sacrifice (even working on a voluntary basis) and the level of engagement of local public administrations by means of offering training, advice and support to the initiatives. In the design phases, an underlined conditioning factor is the perception of the possibility of establishing synergies between sectors and industries, such as agri-food and tourism, to promote the diversification of crops in the area and create new markets associated with endogenous resources.

Other strategic factor is related to the ability to connect the local population with the newcomers, by promoting effective exchanges of information, communication and interaction. Thus, creating a greater sense of community belonging is vital in the population for the continuity of the future SI. The connection between local and newcomers residents can affect the amount of knowledge of the area as a whole. In this regard, informants have highlighted the prior motivation of the new



inhabitants in relation to the rural environment, as part of their life project, even in the case of city-born individuals.

In the most advanced phases of SI projects, informants have clearly underlined three strategic factors. The first one refers to the possibility of the sustainability of actors' long-term commitment. The second one gives relevance to the retention of the added value of actors' actions and their impact on the communities, since the possibilities of reactivating the territory by enhancing its attractiveness and promoting dynamism in local participation are greater. Finally, business organizations and agrarian policies have been identified as potential drivers and amplifiers of the results derived from SI. There is a tendency in the area to regard competition more highly than cooperation; a trend that has its roots in the tradition of individualistic practices in the agrarian world. According to interviewees, in those areas that have benefited from the action of cooperatives, such as in the case of the Oliete's initiative, the collective experience has broadened the actors' scope of action by promoting cooperation and reducing expenses.

The lack of people who comprise a core group of actors that may launch and sustain the process over time constitutes the main barrier to SI seen by the interviewees (Neumeier, 2017). That requires great energy and the existence of connectors who join different people, ideas, money and power together (Rogers, 1995). In the cases analyzed, these barriers are being overcome by establishing ties with local owners, looking for formulas that reinforce trust and socializing the advantages and positive impacts of SI initiatives: reinforcement of other

economic sectors—such as, for example, commerce or tourism—, improvement in leisure and services (Oliete), educational projects (Olba), and riverside landscapes care (in the three cases analyzed).

The interviewees have also mentioned actors' passivity, especially the owners of abandoned land, as barriers to SI. Most of them are retired individuals who neither use nor lease their land, which is rather unproductive and small. These plots of land are left abandoned and, in the best scenario, become an inheritance asset, rather than a retirement income. Therefore, decisions regarding the transfer or transformation of properties are often reserved for succeeding generations. This tendency to passivity hinders innovative actions, as is clearly showed by the case of Olba, where 93% of the land is abandoned but not all owners give it up for use by the initiative.

Second, the determining factors of a structural, institutional and political nature are also relevant. SI discourses are linked with structural problems of the context to which SI initiatives try to respond. The cases analyzed put sustainability at the center, especially social and environmental ones, linked to the ecological transition processes that the region is experiencing. The three cases share discourses related to structural problems of the context. When asking about the causes of land abandonment, most informants mention the conditions of the farms (small size, abandonment of irrigation infrastructures such as ditches) and the institutional abandonment of agriculture. However, beyond this level of analysis, the discourses include considerations about the

unfavorable living conditions in rural areas (services, access roads, Internet rate) that are having a negative impact on processes such as depopulation, the aging of the population, the emigration of young people, and the loss of culture and social cohesion. Each SI case is responding differently to these structural problems.

The case of Alcalá is a proposal for rural entrepreneurship in the livestock sector that involves the use of abandoned pastures and irrigated land (36.7% of the municipal total). The municipality is focused on tourism, especially in winter (ski slopes), has experienced significant urban development in recent decades and has a high percentage of secondary housing. Its altitude determines the type of agriculture to develop and an important part of the population works in services. The family connection of one of the promoters with the town and the desire to change the urban lifestyle of the three promoters are behind this SI initiative. Both motivations—change of lifestyle and reconnection with the family place—, are added to the desire to put into practice new ways of exercising one's own profession (veterinary).

In the case of the “Sponsor an olive tree” initiative, it is located in a town situated in a mining area highly dependent on coal. It is a municipality affected by the energy transition and the closure of coalmines and the thermal power plant in Andorra. Consequently, the idea of minimizing the negative impacts of the energy transition and the fight against depopulation are two core lines in the discourse of the interviewees. In fact, it is the case that most affects this issue: “We want to repopulate an area that is already in the process of coal mining restoration” (Reg\_26). In this case, the discourse highlights the search for new sustainable productive alternatives that promote employment. The objective is to overcome industrial monoculture and recover economic diversification. The promoters have managed to recover many hectares of olive trees, produce olive oil and market it. As the project has grown, initiatives have multiplied, such as the creation of a women's cooperative.

In the case of Olba, the recovery of the abandoned irrigated land (which represents 93% of the total) is a claim that goes hand in hand with the desire to preserve the environment that a group of new residents has chosen for their life project. This group of individuals have moved from urban environments to rural areas with the purpose of living in a way more linked to nature.

Especially in the pro-SI discourses, the vindication of a coherent discourse that articulates the economic-managerial dimension with the territorial one (emotional connection with the territory) is detected. On the one hand, for SI to be successful, great public support for entrepreneurs is required. In this rural scenario, change depends heavily on the individual actions of the actors and the key to success lies in the development of a market that revalues the abandoned land and its crops. Therefore, updating agrarian policies that reward entrepreneurship and favor the agricultural development is

vital. On the other hand, despite the very productive vision of the territory (especially in the case of landowners), a more territorial dimension, which links social change with collective action, has also been detected in all cases. This approach demands, apart from the individual support, the generation of spaces that promote and facilitate cooperation and SI. In this sense, success is associated with organized and cooperative work in order to achieve the same objectives. Therefore, promoting associationism and cooperativism among actors and greater collaboration between the territorial entities themselves are key tools.

Finally, the existence of a shared vision between actors, the high perception of relative advantage, and the positive perception of the probability of reducing barriers are factors that influence the adoption and transfer of SI. According to the informants, residents (both local and newcomers ones), public administrations and companies sharing a vision of the land are essential for those projects that pursue the recovery of abandoned irrigated land. There is consensus on the need to have the greatest support from the local population. In order to ensure the success of the project, interviewees believe that raising awareness among the population by providing information and conducting dissemination campaigns that value the resources of the area is vital.

Regarding the high perception of relative advantage as mediating factor, the interviews show a relationship between the degree of perceived advantage and the perceived degree of marginalization (both acting and territorial one). Thirdly, the leeway perceived by the interviewees and possible actors in SI would be defined as an effect of the perception of the balance between the opportunities and barriers for SI.

The discourses of the subjects around the conditions of possibility of SI initiatives for the recovery of abandoned lands in riverside landscapes, thus show a tendency to change in the visions of the territory, reconfiguring the social practices of the actors involved in these projects. The discourses of the individuals not only reflect the complexities of the SI process in these contexts, but the three cases analyzed show that an exercise of reflexivity takes place between the experiences and its putting into discourse, which contributes to a process of awareness about SI. The main lesson pointed out by the interviewees is that “the impossible is possible” (Reg\_26), through the implementation of true SI initiatives.

## Conclusion

This study has allowed us to approach the discourses on SI, giving us the opportunity of analyzing the discourses of individuals who have promoted SI initiatives to respond to the challenge of recovering abandoned land in riverside landscapes. In the first place, the difference between a negationist discourse of the possibilities of IS in these environments—which is present



in the subjects who have not put initiatives of this nature into practice–, and the possibilistic discourse of the promoters of the three SI experiences analyzed is evident.

In that regard, there is a complex articulation between discourse about SI and the social practices of the subjects, in such a way that the discourses advance the desired changes, drawing and modifying the future vision of the subjects. In this way, a reflexive function of the discourse is revealed in relation to the practice of SI initiatives, which runs through the development of these experiences. In this sense, there is a clear articulation between possibilistic discourses and change in the perceptions of the subjects, a dimension that has been highlighted in previous studies on SI.

In general, subjects' perception of the factors behind successful processes of SI can be reflected, firstly, in certain discursive positions on the interrelationships between individual-collective-institutionality-nature as part of SI initiatives. In this sense, two dimensions have a predominant role, which may seem, at first sight, contradictory: the economic and the emotional role. Both have considerable importance in defining the perceptions about the mediating factors behind the participation of the individuals, the factors that give leeway and the factors that influence the adoption and transfer of SI.

In relation to this, it is highlighted that this possibilistic discourse has as fundamental agents individuals who are not originally from the territory, although they have a strong relationship and sense of belonging with it (emotional dimension) and they show a strong commitment to a life project that is associated with the sustainable development of the territory and that is seen as economically viable. At the same time, the existence of these visions shared by a (small) group of subjects has been the driving force behind the three SI initiatives analyzed.

Social innovation is revealed, in the discourses, as a complex process, crossed by various contradictions such as, for example, the tension between the emotional and rational dimensions–underlined in the riskiest initiatives–, or the tightness between individual and collective dimensions. Although the SI initiatives analyzed are devised as responses to socio-spatial and institutional crises and none of the three experiences has been promoted by the public administration as the main agent, local actors demand greater attention and support from those public institutions that are precisely questioned.

Another relevant dimension in the interviewees' discourses concerning the barriers to SI is what we could qualify as a meta-perception, based on the perception of the interrelationships between the individuals and the SI initiatives. One of the dimensions of these perceptions is related to the characteristics of the subjects' own perception of the feasibility or probability of overcoming obstacles to such initiatives, which results in an ouroboros of meanings that can only be broken through the own experience of the successful SI initiatives by the individuals. Here the complex interrelation between discourse

and practice is demonstrated in what refers to the successful experiences of SI.

The informants' narratives have also generated tension between the economic-managerial and the institutional-territorial approach in relation to the factors behind the adoption and transfer of SI. This is evident in the divergences among the four narratives identified by previous studies and that we found in our analysis (rural fatalism, pro-management, pro-nature and pro-culture), which are reflected in two tendencies in relation to SI: (1) a negationist and fatalistic trend, and (2) a positive or possibilistic tendency.

Consequently, we strongly believe that political instruments should be developed in two complementary directions: (a) to foster place attachment and (b) to strike a balance between capitals, in order to challenge the predominance of its economic-productive dimension. Devising a political instrument for capital management that balances the potentialities of the territory minimizes its weaknesses and lifts barriers, in such a way that it contributes to the social perceptive change and the increase of the individual and territorial resilience. In addition, a more coordinated work between decision-makers and academics is vital in order to generate the most favorable conditions for the implementation and success of the SIP. As Neumeier (2017) points out, research is key to supporting the occurrence of SI by enabling an advantageous "room for maneuver" (Neumeier, 2017, p. 42), within the framework of interdisciplinarity and greater exchange between academics who are familiar with rural landscapes and debates on development and territory.

## Data availability statement

The datasets presented in this article are not readily available because contain personal information. The research team guarantees the anonymity of the participants. Requests to access the datasets should be directed to AS-H, [alex sanz@unizar](mailto:alex sanz@unizar).

## Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent from the participants was not required to participate in this study in accordance with the national legislation and the institutional requirements.

## Author contributions

AS-H: conceptualization, methodology, investigation, data collection, formal analysis, writing–original draft preparation,

supervision, reviewing, and editing. PJ-C: conceptualization, methodology, investigation, resources, data collection, formal analysis, and writing—original draft preparation. LB-P: conceptualization, formal analysis, and writing—original draft preparation. RS and MM-S: resources, data collection, and writing—original draft preparation. All authors contributed to the article and approved the submitted version.

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## References

- Andronic, C., Derszniak-Noirjean, M., Gaupp-Berghausen, M., Hsiung, C. H., Münch, A., and Schuh, B. (2020). *Investigación para la Comisión AGRI - El reto del abandono de tierras después de 2020 y posibles medidas para mitigar sus efectos*. Federal Institute of Agricultural Economics, Rural and Mountain Research (BAB). Available online at: <https://bit.ly/3no16bi> (accessed June 9, 2022).
- Avelino, F., Wittmayer, J., Pel, B., Weaver, P., Dumitru, A., Haxeltine, A., et al. (2019). Transformative social innovation and (dis)empowerment. *Technol. Forecast. Soc. Change* 145, 195–206. doi: 10.1016/j.techfore.2017.05.002
- Beilin, R., Lindborg, R., Stenseke, M., Pereira, H. M., Llausàs, A., Slätmo, E., et al. (2014). Analysing how drivers of agricultural land abandonment affect biodiversity and cultural landscapes using case studies from Scandinavia, Iberia and Oceania. *Land Use Policy* 36, 60–72. doi: 10.1016/j.landusepol.2013.07.003
- Bell, S. M., Barriocanal, C., Terrer, C., and Rosell-Melé, A. (2020). Management opportunities for soil carbon sequestration following agricultural land abandonment. *Environ. Sci. Policy* 108, 104–111. doi: 10.1016/j.envsci.2020.03.018
- Cariola, L., Izquierdo, A. E., and Hilgert, N. I. (2018). Social perception of tree plantations in the Atlantic forest of Argentina: The role of management scale. *Ethnobiol. Conserv.* 7, 1–38. doi: 10.15451/ec2018-10-7.14-1-38
- Carpentier, N. (2012). *The discursive-material knot Cyprus in conflict and community media participation*. New York, NY: Peter Lang.
- Dryzek, J. S. (1997). *The politics of the Earth: Environmental discourses*. Oxford: Oxford University Press.
- Eichler, G. M., and Schwarz, E. J. (2019). What sustainable development goals do social innovations address? A systematic review and content analysis of social innovation literature. *Sustainability* 11:522. doi: 10.3390/su11020522
- Evans, J., and Jones, P. (2011). The walking interview: Methodology, mobility and place. *Appl. Geogr.* 31, 849–858. doi: 10.1016/j.apgeog.2010.09.005
- Feindt, P. H., and Oels, A. (2005). Does discourse matter? Discourse analysis in environmental policy making. *J. Environ. Policy Plan.* 7, 161–173. doi: 10.1080/15239080500339638
- Flora, C. B., and Flora, J. L. (2004). *Rural communities: Legacy and change*. Boulder, CO: Westview Press.
- Foucault, M., and Gordon, C. (1980). *Power/knowledge: Selected interviews and other writings, 1972-1977*. New York, NY: Pantheon Books.
- Frei, T., Derks, J., Rodríguez Fernández-Blanco, C., and Winkel, G. (2020). Narrating abandoned land: Perceptions of natural forest regrowth in Southwestern Europe. *Land Use Policy* 99, 105034. doi: 10.1016/j.landusepol.2020.105034
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Cambridge, MA: Harvard University Press.
- Hajer, M., and Versteeg, W. (2005). A decade of discourse analysis of environmental politics: Achievements, challenges. *Perspect. J. Environ. Policy Plan.* 7, 175–184. doi: 10.1080/15239080500339646
- Hajer, M. A. (1995). *The politics of environmental discourse*. Oxford: Oxford University Press.
- Hempel, C., Will, S., and Zander, K. (2019). Societal perspectives on a bio-economy in Germany: An explorative study using Q methodology. *Int. J. Food Syst. Dyn.* 10, 21–37. doi: 10.18461/ijfsd.v10i1.02
- Huang, Y., Li, F., and Xie, H. (2020). A scientometrics review on farmland abandonment research. *Land* 9:263. doi: 10.3390/land9080263

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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## Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/ffgc.2022.921649/full#supplementary-material>

- Isoaho, K., and Karhunmaa, K. (2019). A critical review of discursive approaches in energy transitions. *Energy Policy* 128, 930–942. doi: 10.1016/j.enpol.2019.01.043
- Kanti Paul, B., Khaledur Rahman, M., Crawford, T., Curtis, S., Giashuddin Miahe, M., Rafiqul Islam, M., et al. (2020). Explaining mobility using the community capital framework and place attachment concepts: A case study of riverbank erosion in the Lower Meghna Estuary, Bangladesh. *Appl. Geogr.* 125:102199. doi: 10.1016/j.apgeog.2020.102199
- Klůvanková, T., Brnkaľáková, S., Špaček, M., Slee, B., Nijnik, M., Valero, D., et al. (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
- Klůvanková, T., Nijnik, M., Spacek, M., Sarkki, S., Perlik, M., Lukesch, R., et al. (2021). Social innovation for sustainability transformation and its diverging development paths in marginalised rural areas. *Sociol. Ruralis* 61, 344–371. doi: 10.1111/soru.12337
- Kumm, K. I., and Hessele, A. (2020). Economic comparison between pasture-based beef production and afforestation of abandoned land in Swedish forest districts. *Land* 9:42. doi: 10.3390/land9020042
- Kuntz, K., Beaudry, F., and Porter, K. (2018). Farmers' perceptions of agricultural land abandonment in rural Western New York State. *Land* 7:128. doi: 10.3390/land7040128
- Lasanta, T., Nadal-Romero, E., and Arnaez, J. (2015). Managing abandoned farmland to control the impact of re-vegetation on the environment. The state of the art in Europe. *Environ. Sci. Pol.* 52, 99–109. doi: 10.1016/j.envsci.2015.05.012
- Lichtman, M. (2014). *Qualitative research for the social sciences*. London: SAGE Publications. doi: 10.4135/9781544307756
- Marini Govigli, V., Alkhaled, S., Arnesen, T., Barlagne, C., Bjerck, M., Burlando, C., et al. (2020). Testing a framework to co-construct social innovation actions: Insights from seven marginalized rural areas. *Sustainability* 12:1441. doi: 10.3390/su12041441
- Martínez Moreno, R., Cruz Gallach, H., Blanco, I., and Salazar, Y. (2019). La innovación social, ¿prácticas para producir autonomía, empoderamiento y nueva institucionalidad? *Rev. Int. Sociol.* 77:e126. doi: 10.3989/ris.2019.77.2.17.022
- Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. *Forum Qual. Soc. Res.* 11. doi: 10.17169/fqs-11.3.1428
- Mulgan, G. (2006). The process of social innovation. *Innov. Technol. Gov. Globalizations* 1, 145–162. doi: 10.1162/itgg.2006.1.2.145
- Munroe, D. K., van Berkel, D. B., Verburg, P. H., and Olson, J. L. (2013). Alternative trajectories of land abandonment: Causes, consequences and research challenges. *Curr. Opin. Environ. Sustain.* 5, 471–476. doi: 10.1016/j.cosust.2013.06.010
- Neumeier, S. (2017). Social innovation in rural development: Identifying the key factors of success. *Geogr. J.* 183, 34–46. doi: 10.1111/geoj.12180
- Ney, S. (2014). "The governance of social innovation: Connecting meso and macro levels of analysis," in *The science of stories*, eds M. D. Jones, E. A. Shanahan, and M. K. McBeth (New York, NY: Palgrave Macmillan), 207–234. doi: 10.1057/9781137485861\_10
- Patton, M. Q. (2002). *Qualitative research & evaluation methods*, 3rd Edn. Thousand Oaks, CA: Sage.
- Pazúr, R., Lieskovský, J., Bürgi, M., Müller, D., Lieskovský, T., Zhang, Z., et al. (2020). Abandonment and recultivation of agricultural lands in Slovakia—patterns and determinants from the past to the future. *Land* 9:316. doi: 10.3390/land9090316
- Pedersen, A. R., and Johansen, M. B. (2012). Strategic and everyday innovative narratives: Translating ideas into everyday life in organizations. *Innov. J.* 17, 2–18.
- Pereira, H. M., and Navarro, L. (ed.) (2015). *Rewilding European landscapes*. London: SpringerOpen. doi: 10.1007/978-3-319-12039-3
- Perpiñá Castillo, C., Coll Aliaga, E., Lavalle, C., and Martínez Llarío, J. C. (2020). An assessment and spatial modelling of agricultural land abandonment in Spain (2015–2030). *Sustainability* 12:560. doi: 10.3390/su12020560
- Polman, N. B. P., Slee, B., Klůvanková, T., Dijkshoorn-Dekker, M. W. C., Nijnik, M., Gežik, V., et al. (2017). *Classification of social innovations for marginalized rural areas*. SIMRA. Available online at: <https://bit.ly/3nmQtnX> (accessed June 9, 2022).
- Prishchepov, A. V., Schierhorn, F., and Löw, F. (2020). Abandonment and recultivation of agricultural lands in Slovakia—patterns and determinants from the past to the future. *Land* 10:97. doi: 10.3390/land10020097
- Rey Benayas, J. M., Martins, A., Nicolau, J. M., and Schulz, J. (2007). Abandonment of agricultural land: An overview of drivers and consequences. *CAB Rev.* 2, 1–14. doi: 10.1079/PAVSNNR20072057
- Roe, E. (1994). *Narrative policy analysis: Theory and practice*. Durham: Duke University Press.
- Rogers, E. (1995). *Diffusion of innovation*. New York, NY: The Free Press.
- Sanz-Hernández, A. (2021b). Representaciones sociales de los paisajes forestales: Un estudio de caso en España sobre la relación entre las dinámicas de cambio forestal, el sentido de la propiedad y la gestión sostenible. *Rev. Int. Sociol.* 79:e191. doi: 10.3989/ris.2021.79.3.20.71
- Sanz-Hernández, A. (2021a). Privately owned forests and woodlands in Spain: Changing resilience strategies towards a forest-based bioeconomy. *Land Use Policy* 100:104922. doi: 10.1016/j.landusepol.2020.104922
- Sarkki, S., Rantala, L., and Karjalainen, T. P. (2015). Fit between conservation instruments and local social systems: Cases of co-management and payments for ecosystem services. *Change Adapt. Soc. Ecol. Syst.* 2, 59–78. doi: 10.1515/cass-2015-0007
- Schmidt, V. A. (2008). Discursive institutionalism: The explanatory power of ideas and discourse. *Annu. Rev. Polit.* 11, 303–326. doi: 10.1146/annurev.polisci.11.060606.135342
- Secco, L., Pisani, E., Da Re, R., Rogelja, T., Burlando, C., Vicentini, K., et al. (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
- Silveira, F. F., and Zilber, S. N. (2017). Is social innovation about innovation? A bibliometric study identifying the main authors, citations and co-citations over 20 years. *Int. J. Entrep. Innov. Manage.* 21, 459–484. doi: 10.1504/IJEIFM.2017.086936
- Soliva, R. (2007). Landscape stories: Using ideal type narratives as a heuristic device in rural studies. *J. Rural Stud.* 23, 62–74. doi: 10.1016/j.jrurstud.2006.04.004
- Soliva, R., and Hunziker, M. (2009). Beyond the visual dimension: Using ideal type narratives to analyse people's assessments of landscape scenarios. *Land Use Policy* 26, 284–294. doi: 10.1016/j.landusepol.2008.03.007
- Subedi, Y. R. (2022). Drivers and consequences of agricultural land abandonment and its reutilization pathways: A systematic review. *Environ. Dev.* 42:100681. doi: 10.1016/j.envdev.2021.100681
- Suri, H. (2011). Purposeful sampling in qualitative research synthesis. *Qual. Res. J.* 11, 63–75. doi: 10.3316/QRJ1102063
- TEPSIE (2014). *Social innovation theory and research: A summary of the findings from TEPSIE. A deliverable of the project: 'The theoretical, empirical and policy foundations for building social innovation in Europe' (TEPSIE) European Commission – 7th Framework Programme*. Brussels: European Commission.
- Terres, J. M., Scacchiafichi, L. N., Wania, A., Ambar, M., Anguano, E., Buckwell, A., et al. (2015). Farmland abandonment in Europe: Identification of drivers and indicators, and development of a composite indicator of risk. *Land Use Policy* 49, 20–34. doi: 10.1016/j.landusepol.2015.06.009
- UN FAO (2006). *The role of agriculture and rural development in revitalizing abandoned/depopulated areas*. Rome: Food and Agriculture Organization of the United Nations.
- Valles, M. S. (1997). *Técnicas cualitativas de investigación social*. Madrid: Síntesis.
- Van Vliet, J., de Groot, H. L. F., Rietveld, P., and Verburg, P. H. (2015). Manifestations and underlying drivers of agricultural land use change in Europe. *Landsc. Urban Plan.* 133, 24–36. doi: 10.1016/j.landurbplan.2014.09.001
- Vercher, N., Barlagne, C., Hewitt, R., Nijnik, M., and Esparcia, J. (2021). Whose narrative is it anyway? Narratives of social innovation in rural areas – a comparative analysis of community-led initiatives in Scotland and Spain. *Sociol. Ruralis* 61, 163–189. doi: 10.1111/soru.12321
- Vuillot, C., Mathevet, R., and Sirami, C. (2020). Comparing social representations of the landscape: A methodology. *Ecol. Soc.* 25:28. doi: 10.5751/ES-11636-250228
- Wiesinger, G. (2009). The importance of social capital in rural development, networking and decision-making in rural areas. *J. Alp. Res.* 2009, 43–56. doi: 10.4000/rga.354
- Wittmayer, J. M., Backhaus, J., Avelino, F., Pel, B., Strasser, T., Kunze, I., et al. (2019). Narratives of change: How social innovation initiatives construct societal transformation. *Futures* 112:102433. doi: 10.1016/j.futures.2019.06.005