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# Using Social Impact Assessment to Strengthen Community Resilience in Sustainable Rural Development in Mountain Areas

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*Building community resilience is an important topic in the current debate about achieving positive community development outcomes from sustainable place-based policies, especially in mountain regions and less-favored areas. At the practical, grassroots level, however, it remains unclear how community resilience can be effectively included and assessed in local development efforts. We argue that social impact assessment (SIA) can and should play a key role in assessing regional development strategies and proposals and in building community resilience. We present the SIA Framework for Action as a tool to enhance policies, plans, programs, and projects and to assist in attaining appropriate social development outcomes, including community resilience. We demonstrate the value of the framework by discussing its application in a development project in rural Italy—the restoration of the Tratturo Magno, an ancient path used by shepherds and flocks for transhumance over centuries. The project,* Vie e Civiltà della Transumanza, patrimonio dell'Umanità *(Routes and Civilization of Transhumance World Heritage), inter alia, sought to promote rural tourism by restoring parts of the Tratturo Magno in the area damaged by the 2009 L'Aquila earthquake*.

***Keywords:*** *Community resilience; rural communities; social sustainability; community development; sustainable development; community engagement; territorial development; endogenous regional development; Italy*.

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## Introduction

From before their inception to after completion, all development interventions create social changes and changes in power relations, with intended and unintended, positive and negative social consequences (Vanclay 2015). These impacts are perceived and experienced by local communities living in the area of the intervention (Vanclay 2012). Therefore, before, during, and after the design, construction, operation, and completion of each development policy, plan, program, and project, the social impacts (both negative and positive) of the intervention need to be predicted, assessed, mitigated, monitored, managed, and understood in their local social context. Acknowledging how the social issues are perceived, experienced, and interpreted by local communities and addressing their concerns are crucial to ensure that development interventions become more effective in achieving positive development outcomes and more socially sustainable—in effect, to gain a "social license to operate" (Dare et al 2014; Jijelava and Vanclay 2014a, 2014b).

Sustainable development requires much more than technical innovation (Mahmoudi et al 2013); it also requires careful consideration of the social issues (Vanclay 2012). It must facilitate cooperative discourses (Webler et al 1995) with affected local communities, and be able to coproduce transformational knowledge (Pohl et al 2010; Future Earth 2014; Patterson et al 2015) that can

1. identify and mitigate the social risks and vulnerabilities that characterize the social context;
2. address the negative social impacts and human rights issues that may be created by the project at the community level;
3. acknowledge local needs and desires for, and perceptions of, past, present, and future development;
4. recognize the local knowledge and local capacities that need to be engaged and strengthened;
5. build deliberative spaces and facilitate deliberativeness in order to enhance social development (Vanclay et al 2015).

Building community resilience (eg Adger 2000; Pfefferbaum et al 2007; Norris et al 2008; Magis 2010;



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Davoudi 2012; Wilson 2013; Kelly et al 2015) is considered key to enhancing community development outcomes, especially in mountains and other vulnerable areas (FAO 2011; UNFCCC, COP 2015). Community resilience can be understood as "the social survival processes that occur within a place that are put into action by local communities in order to address the negative social and economic impacts they perceive as common problems during crises" (Imperiale and Vanclay 2016: 216). Planning and implementing sustainable interventions requires skills in understanding, managing, and enhancing community resilience. We argue that social impact assessment (SIA) can assist the project team and the planning process in this task.

SIA is a field of research and practice that is concerned with the processes of identifying and managing all the social issues associated with project development, including the effective engagement of affected communities (Esteves et al 2012; Vanclay et al 2015). Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment (Vanclay 2003). SIA is an interdisciplinary discourse and practice that has been developing since the early 1970s (Vanclay 2014). It can assist in the adaptive management of sustainable development projects and can help achieve positive social development outcomes (João et al 2011).

In this paper we demonstrate how SIA can be applied in development projects in mountain areas through the SIA Framework for Action—an innovative adaption of the standard SIA approach (Vanclay et al 2015)—to have a greater focus on enhancing positive outcomes, including local community resilience. We developed the framework as a result of the involvement of the lead author as a paid consultant in the rural development project *Vie e Civiltà della Transumanza, patrimonio dell'Umanità* (Routes and Civilization of Transhumance World Heritage), in the Abruzzo region of central Italy, which, inter alia, sought to promote rural tourism by restoring the Tratturo Magno, an ancient shepherds' path.

## SIA as a way to improve community development outcomes

SIA includes processes for analyzing, monitoring, and managing the social consequences of planned interventions (Esteves et al 2012). It is codified in the 2003 *International Principles for Social Impact Assessment* (Vanclay 2003); the core literature on SIA (eg Vanclay 2002, 2003, 2004, 2006, 2012, 2014; Vanclay and Esteves 2011; Esteves et al 2012); and an international guidance document (Vanclay et al 2015). Vanclay (2002: 184) distinguished social impacts from social change processes, arguing that the "social impacts likely to be significant will vary from place to place, from project to project, and the weighting assigned to each social impact will vary from community to community and between different groups within a given community." Thus, it is essential to involve affected people and other stakeholders in the analysis of impacts and the planning of mitigation and benefit strategies (Esteves et al 2012; Vanclay et al 2015).

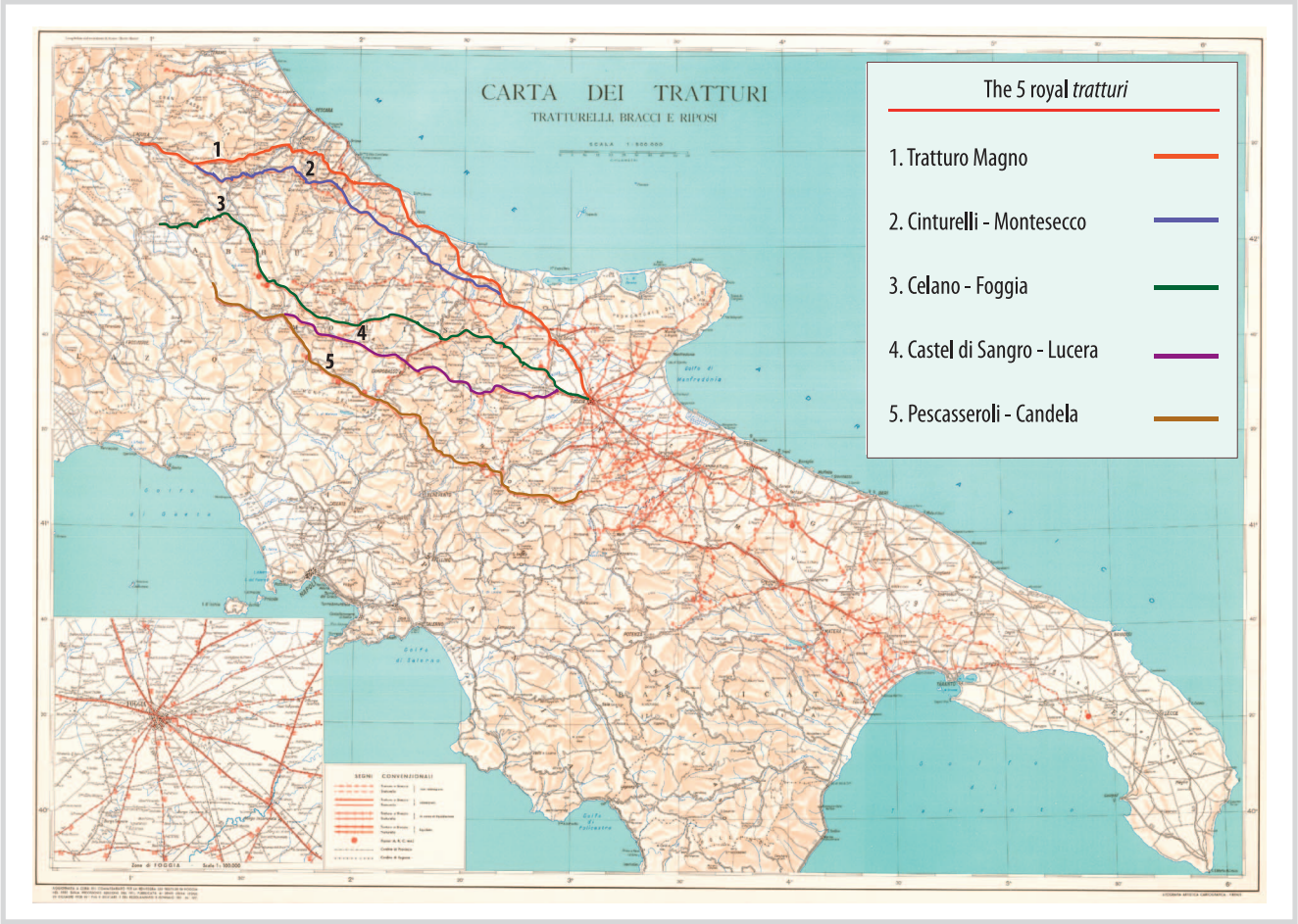
Although widely established in many contexts, especially with large infrastructure projects such as mines, dams, airports, highways, and pipelines (Vanclay 2014), SIA has not typically been used with sustainable development projects in mountain regions. We argue that SIA should be used in sustainable development projects and rural development programs to enhance the achievement of positive community development outcomes. Drawing on our action research in the mountain area hit by the 2009 L'Aquila earthquake, we developed the SIA Framework for Action. Use of the framework will contribute to building community resilience, empowering local communities, and making transformations toward social sustainability. Drawing on recent theoretical and practical advances in SIA at the international level (Vanclay 2014; Vanclay et al 2015) and on our experiences with the Tratturo Magno project, in this paper we demonstrate how SIA, as a philosophy and a process, can be applied to sustainable development policies, plans, programs, and projects in mountain and rural areas to help decision-makers, project teams, and local communities achieve positive social development outcomes.

Over the last few decades, mountain regions have experienced an increase in simultaneous and interacting global stresses (Homer-Dixon et al 2015), including climate change (eg Nelson et al 2009; Pelling 2010; IPCC 2014), resource scarcity (eg Haas 2002, 2015; Pirages and Cousins 2008; Brown et al 2014), and financial crises (eg OECD 2011), and they have been disproportionately affected by local social transformations induced by these global trends (FAO 2011). There have also been local change processes—notably urbanization, coastalization, land abandonment, land degradation, and depopulation. Local communities need to develop greater capacity to manage the negative impacts of these changes while exploring new opportunities for healthy transformation and social change that can lead to positive social development (Imperiale and Vanclay 2016).

Because of increasing local community concerns about sustainable development projects in vulnerable areas, we suggest there is a key role for SIA. SIA can enhance the participatory approaches used to promote a sustainable development project by providing information about the social risks, vulnerabilities, and social change processes affecting the area in which the project takes place, clarifying the desired outcomes of the project, and identifying appropriate strategies to mitigate potential negative impacts and maximize social development outcomes. In this paper, we demonstrate how this was done in the restoration of the Tratturo Magno.


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**FIGURE 1** The network of *tratturi* in southern Italy, and location of the 5 royal *tratturi*. (Map provided by the Regional Office of Tratturi, Foggia, and adapted by the first author)




## Restoring the Tratturo Magno

*Tratturi* (singular *tratturo*) are public grassy paths across which thousands of shepherds have moved their flocks, practicing transhumance, for centuries. Transhumance can be vertical, from highland to lowland pastures in the same region, or horizontal, across regions (Montero et al 2009). Southern Italy contains an intricate network of *tratturi* that converge in the province of Foggia in the Puglia region. The *tratturi* cross 6 Italian regions: Abruzzo, Molise, Puglia, Lazio, Campania, and Basilicata (Figure 1). The 5 most significant tracks are called the *regi* (royal) *tratturi*. By ancient decree, the *regi tratturi* are precisely 111 m wide and are inalienable public lands (Marino 1988). At 244 km, the Tratturo Magno (Figure 2) is the longest. Although the *tratturi* remain common land, the practice of transhumance has changed over time, and the pathways have frequently been used for other purposes, such as railways and roads.

The rich cultural and natural landscape associated with transhumance has decayed over time with the decline of this rural tradition. Much of the cultural heritage along the Tratturo Magno has been degraded, and parts have become overgrown. The restoration of the Tratturo Magno in the mountain province of L'Aquila was a key component of the *Vie e Civiltà della Transumanza* project, the primary objectives of which were to rehabilitate 500 km of paths and to erect route markers and signage with digital QR codes providing information about the surrounding natural and cultural heritage. The goal was to promote rural tourism in the region by organizing events, marketing, and producing maps, smart phone apps, and a website (http://tratturiecammini.galgransassovelino.it). The project was initiated by the Local Action Group Gran Sasso-Velino, and was cofinanced by the Abruzzo region and the European Agricultural Fund for Rural Development.

A subproject of *Vie e Civiltà della Transumanza* focused on improving a section of the Tratturo Magno from the city of L'Aquila (42°20′34.40″N; 13°24′15.26″E) to the locality of Valico Forca di Penne near the village of Capestrano in the province of L'Aquila (42°16′55.00″N; 13°50′15.28″E) and a minor branch, the Regio Tratturo Cinturelli-Montesecco, which together total 62 km in


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**FIGURE 2** Trekkers along the Tratturo Magno. (Photo by Angelo J. Imperiale)



length. Hereafter, activities related to restoring this section of the Tratturo Magno and the Regio Tratturo Cinturelli-Montesecco are referred to as the Tratturo Magno project. These paths traverse 10 municipalities that were badly affected by the April 2009 L'Aquila earthquake. The lead author of this paper, an Italian social research consultant, was engaged by the Local Action Group Gran Sasso-Velino to support the Tratturo Magno project by gathering tourism data and assisting with community engagement activities.

## The SIA Framework for Action

The SIA Framework for Action (Figure 3) was developed during action research on the Tratturo Magno project. An adaptation of the SIA model (Vanclay et al 2015), it is a set of actions that social practitioners can implement together with local communities to help decision-makers, development agencies, and local communities achieve improved social outcomes through enhanced understanding and better management of the social issues associated with development projects.

Use of the SIA Framework helps in codesigning "transformations towards sustainability," as specified in Theme 3 of the Future Earth Strategic Research Agenda (Future Earth 2014), and specifically in enhancing outcomes through building community resilience and empowering local communities. The framework's 4 phases—understanding the local context, recognizing local concerns and capacities, engaging local communities, and empowering sustainable transformations—are discussed below.

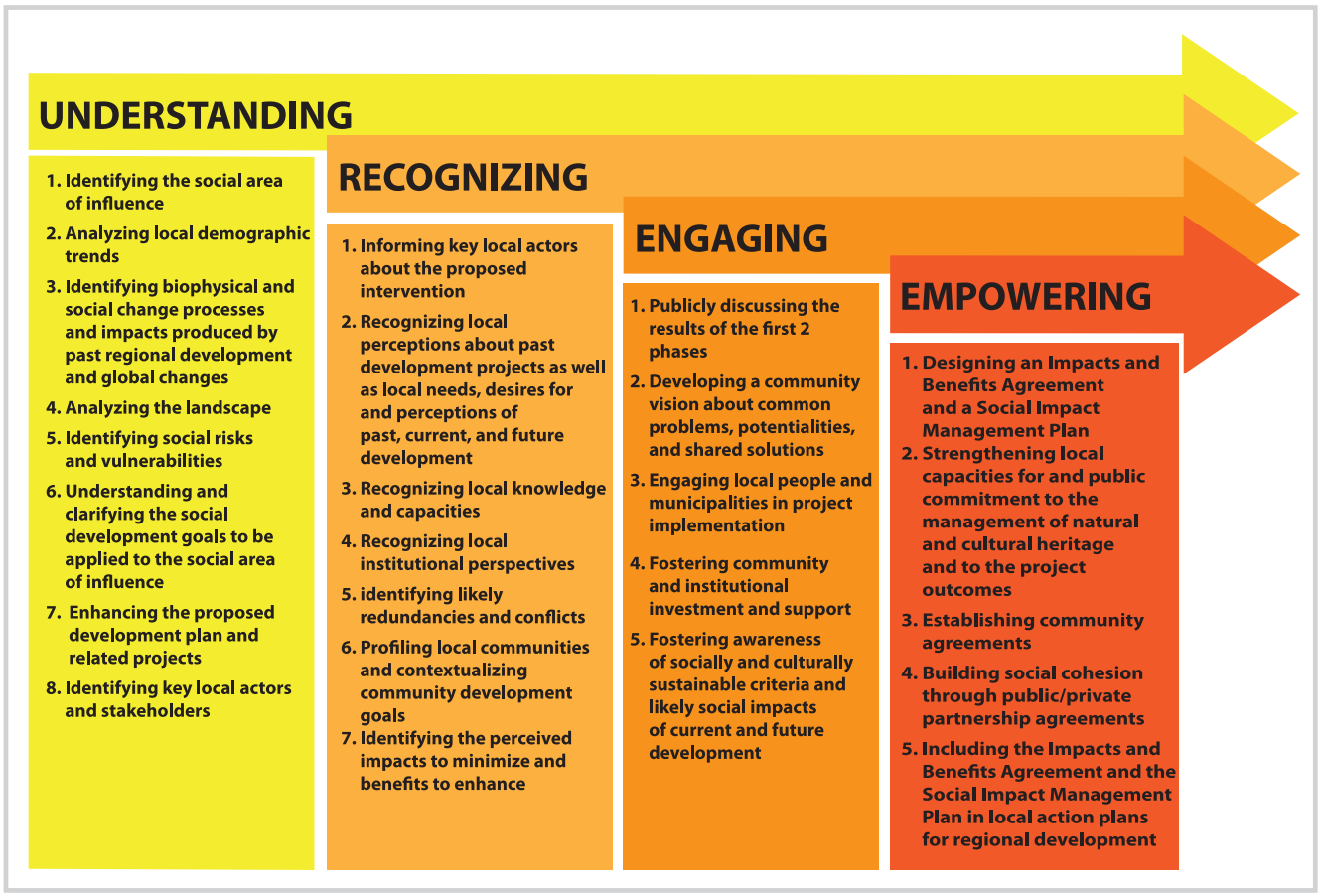
### Phase 1: understanding the local context

A solid understanding of local social issues should guide the design of a sustainable development plan and its projects. The "understanding" phase includes identifying the social area of influence—the people potentially affected by the project, including the "communities of place" and "communities of interest" (Vanclay et al 2015). For place-based interventions, this is typically the people living near the development site. Rather than being a political process, establishing the appropriate boundaries around this area of influence requires identifying the conditions conducive to development (Barca 2009). Understanding a project's biophysical, social, and institutional context helps clarify the specific needs and social development goals for an appropriate intervention, and helps decision-makers comprehend the "place" of the intervention (Slootweg et al 2001).

In this phase, SIA helps identify and conceptualize specific local biophysical and social change processes (eg demographic, economic, geographical, and sociocultural processes; see Vanclay 2002) that result from past regional development projects or from any related higher-order changes or impacts that may influence local community


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**FIGURE 3** The 4 phases of the SIA Framework for Action. (Adapted from Vanclay et al 2015)




perspectives on development or their levels of trust. A demographic trends analysis helps to understand the structure and dynamics of the local population and its demographic and social change processes. A landscape analysis helps identify natural and cultural heritage resources and their state of conservation by contributing an understanding of the influence of past social change processes on the patterns of land use, for example urbanization and coastalization (see Vanclay 2002).

Another key action during this phase is assessing the vulnerabilities and related social risks affecting the project site and surrounding communities, including those associated with or likely to be exacerbated by disasters. Reference to regional and national demographic trends can help identify these. Typically, a regional development project needs to be framed within the regional social perspective and in terms of broader national and international strategies for sustainable development. Data collected during this phase help clarify and contextualize the specific area to be included in the process; the most relevant social issues associated with the policy, plan, or project being evaluated; and the social development goals. This can improve the design of local development projects.

For the Tratturo Magno project, the social area of influence was identified as being the 10 rural municipalities in the L'Aquila mountain area that are traversed by the Tratturo Magno and the Regio Tratturo Cinturelli-Montesecco. The demographic trends analysis revealed population decline, aging, and outmigration as of the 1950s as having had a large influence on population structure and dynamics. Our field research and the secondary data we considered indicated that accountability associated with past rural development actions, most of which have been abandoned, was poor. This legacy has negatively influenced local trust and attitudes towards future development projects. The risks and vulnerabilities of the local area, which primarily relate to regional decline (OECD 2013), were much affected by the 2009 earthquake, especially because subsequent recovery and reconstruction activities were undertaken in a hasty and ill-considered way (Alexander 2010, 2013; Imperiale and Vanclay 2016).

The landscape analysis revealed underdeveloped potential relating to local natural and cultural heritage. For example, project activities led to the detection of fortified settlements from the Iron Age (10th to 5th centuries BC), historic shepherds' refuges (Figure 4), and


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**FIGURE 4** An ancient shepherds' refuge. (Photo by Angelo J. Imperiale)



historic milestone markers along the Tratturo Magno. The landscape analysis also revealed that most cultural heritage along the path was overgrown or in disrepair. A geographic information system was used to georeference any identified heritage resources. This process supported the participatory visualization and community mapping processes during the "engaging" phase, which helped facilitate a shared vision of local cultural and natural heritage resources.

Reference to international policies and the academic literature on sustainable mountain development (Price and Kim 1999; Price 2009; Barkin 2010, 2012; Gurung et al 2012; FAO 2011) as well as to the Italian National Strategy for Inner Areas (Barca et al 2014) helped the Tratturo Magno project management team clarify the community development goals that needed to be reached together with "restoring the path" and "promoting rural tourism." The identified community development goals were (and will continue to be) reviewed over time according to new international policy guidelines that emerge(d) during the life of the project. For example, "building the resilience of socioeconomic and ecological systems, including through economic diversification and sustainable management of natural resources" (UNFCCC, COP 2015: 25) and "handing back to local communities the management of and access to local resources" (Barca et al 2014: 42) were added as key community development goals. These goals were subsequently redefined and better contextualized in discussions with local key actors, stakeholders, and other members of the public in subsequent phases of the SIA Framework for Action.

The research steps undertaken during the "understanding" phase contributed to knowledge of the social area of influence and of local stakeholders. This helped the project management team clarify the community development goals, identify potential social risks and vulnerabilities that might undermine the project, and identify ways to mitigate them.

Key local actors and stakeholders were identified by various means. They included people living and working along the Tratturo Magno who could be directly affected by the proposed actions—especially local entrepreneurs who cater to visitors hiking the Tratturo Magno. For each of the 10 municipalities involved in the project, 1 local nongovernmental organization (NGO) was selected by analyzing local NGOs' activities through social networks and through field discussions with local people in each village. The NGOs were selected using the criteria of (1) the likelihood of the NGO developing social activities compatible with the Tratturo Magno project and (2) the representativeness and legitimacy of the NGO with the wider population. Often, the local *Pro Loco* group was selected. The mayors of the municipalities were also considered to be key stakeholders.


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### Phase 2: recognizing local concerns and capacities

The "recognizing" phase involves predicting, analyzing, and assessing the likely impacts of the proposed intervention and helps development agencies refine their proposals to better address local needs and perceptions and to recognize resilient capacities (Esteves and Barclay 2011; Esteves et al 2013). In the Tratturo Magno project, the first step in this phase was informing key actors and stakeholders about the proposed intervention. By interviewing local entrepreneurs and members of local community groups, this became a listening process that recorded people's perspectives and reflections about the main problems in the area and people's capacity to address them.

Between September and December 2014, interviews were undertaken with 55 local business people and 10 representatives of local community groups who had been selected during the "understanding" phase. Representatives of all businesses located on the Tratturo Magno were also interviewed. A survey used with local entrepreneurs provided information about the Tratturo Magno project and asked the entrepreneurs about the nature of their businesses, their problems and needs, and what they could do to contribute to the success of the project.

The survey used with local NGOs requested an account of their goals and activities, especially in relation to any local cultural events that could be supported or promoted by the Tratturo Magno project. It also requested information about the natural and cultural heritage in the region the NGOs considered to be significant, as well as about their perceptions of the main issues in implementing sustainable development in the region. Following completion of the survey, in-depth interviews were conducted to gain a better understanding of these issues and to collect anecdotes related to the traditional use of the Tratturo Magno.

Semistructured interviews were conducted with the mayors of the 10 municipalities traversed by the paths. They were asked about how institutional support for the Tratturo Magno project might be gained, and about any cumulative impacts that might arise from other planned interventions in the region.

This process of listening was crucial to recognize and acknowledge local perceptions of past and future development interventions—and to identify and acknowledge local knowledge and abilities, which were then used to enrich the planned intervention. Interviews with the mayors helped to clarify the local institutional perspective and identify additional interventions that had the potential to influence the project. For example, a badly planned highway and the construction of the TransAdriatic Pipeline emerged as key threats to the Tratturo Magno project.

The problems and needs mentioned by participants included poor management of local natural and cultural resources, low levels of awareness of these resources, a lack of tourist information, poor public governance of local development interventions, lack of transparency, limited opportunities for public participation, unfairness in development policies, lack of cooperation among local entrepreneurs, and limited local expertise in place branding and marketing. The social and cultural polarization between urban and rural areas was also mentioned, especially by local NGOs. There was also a general feeling of marginalization and exclusion from the main development policies influencing transformation within Italy.

To be as inclusive as possible, the "recognizing" process has to identify all the subgroups in the local communities, especially the most marginalized and vulnerable. For example, in sustainable mountain development, although attention is often given to tourism, it is also crucial to recognize and empower the role of local shepherds in maintaining and preserving the landscape, to minimize the risk that the tourism industry (which is often externally owned) might displace rather than sustain local livelihoods.

In the Tratturo Magno project, to take the role of shepherds into account, with the help of the provincial Animal Health Service we identified 21 local farmers. They were grazing 5368 sheep, 255 beef cows, 248 dairy cows, and 36 goats, with an estimated annual production value of over € 1 million. Implementing integrated strategies that would promote rural tourism in a way that strengthens the primary sector of the local economy is vital in the L'Aquila mountain area and elsewhere.

### Phase 3: engaging local communities

The "engaging" phase supports the development of mitigation and social development strategies and helps development agencies achieve social development outcomes, such as enhanced community resilience. The "engaging" phase is effective when it promotes positive collective feelings such as empathy, solidarity, social responsibility, and a sense of public duty. In resilient communities, these feelings motivate people to work together towards addressing common problems and finding shared solutions (Imperiale and Vanclay 2016). The "engaging" phase helps develop these feelings through publicly discussing individual concerns registered during the "recognizing" phase. This process helps local communities to progress from the mere collection of individual complaints into a community vision about common problems, common potentialities, and shared solutions, and it helps build a social environment of cooperation and mutual aid around these issues. Overall, the engaging process helps strengthen the social feelings and interactions that underlie community resilience and collective trust, and assists local communities in identifying the shared measures they need to implement


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in order to mitigate negative social impacts and maximize the social benefits likely to derive from the planned intervention.

In the Tratturo Magno project, this phase comprised 3 participatory field visits, 4 public meetings, and 3 cultural events undertaken between January and July 2015. An open invitation to these events was extended to all local residents and the broader interested public. The events were designed to identify potential ways to mitigate the problems and needs identified during the previous phase, such as poor awareness of the local natural and cultural heritage, lack of cooperation and trust, lack of a shared vision for future development, and social marginalization.

The main objectives of these activities were building a community vision of shared problems and strategies, increasing awareness of local cultural and natural heritage, building local capacities, and promoting greater use of local resources. Publicly discussing the "understanding" and "recognizing" phases through focus groups and public meetings helped the local communities discuss and reflect on the perceived common problems and needs. Collectively visualizing the data about natural and cultural heritage resources that were gathered during the "understanding" phase, as well as the engagement of local experts and the participatory nature of field inspections, helped local communities understand existing vulnerabilities and underdeveloped potential.

Through the use of an online reflection tool, this process also helped local entrepreneurs develop a formal network agreement (*Contratto di Rete,* described below) by explicating the conditions necessary for their social and cultural sustainability (Mercer 2002; Murphy 2012) and in the determination of the social impacts and expected benefits of rural tourism (see UNESCO 2010, 2012; McCombes et al 2015).

The reflection tool was a precursor to the "empowering" phase and to the building of the network agreement. It required local entrepreneurs to reflect on the criteria for social sustainability and consider how these criteria could be achieved and respected in their partnership in the future. It encouraged them to consider the likely impacts (both positive and negative) that the development of tourism might have on the daily lives of local people (ie their habits, health, business, and culture) and on the area in which they live (ie the environment, community life, cultural heritage, and economy). Mass tourism did not yet exist in the area, and participants' responses revealed that they considered benefits much more likely than negative impacts. The reflection tool helped develop the necessary awareness to ensure the sustainable management of the partnership and of tourism development, and raised local awareness of the likely negative impacts of poorly managed tourism development.

The "engaging" phase gained institutional support for the Tratturo Magno project from some local municipalities. For example, one municipality contributed to restoring public access to a portion of the Tratturo Magno that had been inaccessible for over a decade. The process fostered additional local actions that enhanced the project's outcomes. For example, one local NGO, using its own resources, engaged a local carpenter to improve tourist signage along the Tratturo Magno (Figure 5). These actions helped build a broad community vision that focused attention on common problems, shared solutions, and a shared perspective on sustainable development. This process gained formal legitimacy with the development of a collective agreement established in the final phase.

### Phase 4: empowering socially sustainable transformations

The "empowering" phase places SIA monitoring programs and tools in the hands of local communities and strengthens their collective sense of social responsibility and commitment to maintain project outcomes. It also helps establish collective agreements to create legitimacy, build deliberative spaces, and facilitate deliberativeness in order to enhance social development around the shared vision developed during the previous phases. The development of community agreements offers an improved approach to sustainable rural development by "balancing the costs of projects with desired community benefits; incorporating local knowledge and concerns; feeding back and responding to information about ongoing impacts; defining the local community's economic participation in the development; and securing the significance continuing involvement of communities in determining their futures relative to the development process" (Nish and Bice 2011: 59).

To be as inclusive as possible, agreements must be established among local entrepreneurs, as well as between local entrepreneurs and local municipalities and NGOs. The "empowering" phase helps development agencies and local communities codesign and implement monitoring strategies by providing tools to collectively evaluate the social sustainability of the transformations evoked by current and future development actions. Because of the ecological fragility of mountain areas, having mandatory commitments to protect and respect natural and cultural heritage in the local action plans of these collective agreements is crucial to enhance the resilience of local people and the area as a whole.

For the Tratturo Magno project, the "empowering" phase consisted of 10 group discussions with local entrepreneurs, conducted between July and September 2015. These discussions were held to ensure that an effective network agreement between them could be reached, one that reflected their desires and priorities and acknowledged their fears and concerns. The network agreement thus reached also consolidated the commitment of the local entrepreneurs to maintain the


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**FIGURE 5** Members of a local community group erecting handmade wooden signs outside the mountain village of San Demetrio Ne' Vestini on the Tratturo Magno path. The village mayor is second from left. The shorter post displays a QR code to access information about the site. (Photo by Angelo J. Imperiale)




Tratturo Magno project outcomes, especially in relation to the need to better manage the restored path and local cultural and natural heritage. These discussions, which were continued in the fourth phase of the SIA Framework for Action, resulted in the creation of a legal entity, the network agreement Landscapes in Transhumance.

Aspects of the community vision developed during the "engaging" phase were carried forward in a sustainable mountain development project proposed by Landscapes in Transhumance called Vestini Transhumance Route: Building an Ecomuseum in the L'Aquila Mountain Province. An ecomuseum can be understood as a philosophy, an approach, and the expression of the commitment of local communities to value their local heritage (Maggi and Falletti 2000; Perella et al 2010). Ecomuseums celebrate the natural and cultural heritage of specific regions, and can be considered as both a community-based museum and a museum-oriented community (Davis 2011). They are characterized by their embeddedness within their regional communities and are often described as museums without walls (Vanclay et al 2008; Davis 2011).

One of the project's expected outcomes is increased social and territorial cohesion and a more proactive role for local communities in natural and cultural heritage management. Through participatory design and implementation, the ecomuseum project aims to strengthen local environmental and cultural education by enhancing knowledge of local resources and providing opportunities for universities and research centers to carry out fieldwork in the region in order to promote a culture of sustainability and sustainable mountain development.

Landscape in Transhumance plans to develop an Impacts and Benefits Agreement (specifying the expected impacts and benefits of the project) and a Social Impact Management Plan (which identifies strategies to mitigate potential negative impacts and maximize community benefits) (Franks and Vanclay 2013). These tools will use data obtained during the "recognizing" and "engaging" phases and will be revised periodically. Including these documents in agreements with development agencies and local governments will help make local people's voices fully heard, improve transparency, mitigate the risk of planned interventions being captured by the self-interest of local elites, and orient decision-makers toward effective ways to build community resilience.

## Conclusion

Mountain environments are fragile (FAO 2011), and interventions undertaken there need to facilitate transformations toward sustainability (Future Earth 2014). What does this mean in social terms for people living in these areas? We suggest that all possible social issues can be encompassed in the broader process of building


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community resilience, because community resilience implies healthy and socially sustainable transformative changes at the community level, including improving local governance and local decision-making processes. The wider use of SIA would increase the potential of sustainable-development projects to achieve resilience and other desired outcomes.

Significant areas of inland Italy, including the area traversed by the Tratturo Magno in L'Aquila Province, have become increasingly marginalized through population decline, job cutbacks, land abandonment, reduction in public and private services, and degradation of cultural and natural heritage (Barca et al 2014). Public and private efforts to extract resources from these inland areas (eg quarries, transmission lines, landfills, logging, and power plants) have had severe negative environmental and social impacts, and have failed to provide social benefits or generate local innovation (Barca et al 2014). Local administrations have given the go-ahead to these projects largely because of their weak negotiating power due to their lack of funding and other capacity deficits (Barca et al 2014). Strengthening community resilience and institutional capacity is therefore crucial to reverse this ongoing degradation. All along the Tratturo Magno, many badly managed interventions—such as quarrying, the unplanned and uncontrolled construction of private buildings, and the construction of industrial warehouses, factories, and transport infrastructure—have contributed to increased land abandonment, land degradation, and cultural, ecological, and economic decline.

To reverse these negative trends, it is crucial to build community resilience by collectively understanding and evaluating transformations towards sustainability, identifying and promoting sustainable behavior, and transforming development pathways (Future Earth 2014). This paper demonstrated the potential of the SIA Framework for Action to promote sustainable development and community resilience. At all points along the project cycle, SIA can promote constructive dialogue and collective deliberation through which researchers and community stakeholders can coproduce knowledge about what is locally needed in the present and for the future. This cooperative discourse can encourage decision-makers and project managers to codesign, with residents, shared strategies for mitigating negative impacts and enhancing positive community-development outcomes. Indeed, exploring "effective methodologies of social impact assessment to better understand the role local communities can play in reversing negative trends in mountain areas" and evaluating "social platforms for sustainable models and value generation in order to encourage the proactive role of communities in natural and cultural heritage management, promote territorial and social cohesion for more 'inclusive growth,' and strengthen community resilience through strategic development" are now considered key research activities needed to build sustainable social–ecological systems within mountain regions (Drexler et al 2016: 39).

The SIA community must work harder to establish the relevance and effectiveness of SIA on the European and world stages. The SIA Framework for Action showed that the new development trends described above can be considered by SIA and included within its processes and practices, as also shown by previous studies (eg Esteves and Vanclay 2009). The SIA Framework for Action helps local communities, social practitioners, project managers, development agencies, and decision-makers to better understand and conceptualize the actions needed to enhance social development outcomes, such as enhanced local community resilience. It helps rural and mountain development policies, plans, programs, and projects take a community-oriented approach to planning and project implementation.

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