

Social Innovation for Energy Transition: Activation of Community Entrepreneurship in Inner Areas of Southern Italy

Mariarosaria Lombardi, Maurizio Proserpi and Gerardo Fascia

1. Introduction

The current reliance on fossil fuels is unsustainable and harmful to the planet, being the main cause of climate change. It is well known that the use of renewable energy sources is one of the actions to pursue the energy transition towards zero-carbon fuels, capable of reducing the emission of greenhouse gases (GHGs), which are listed amongst the main causes of climate change.

In this context, inner areas, characterized by constant demographic decline and population aging, could play an important role in adopting measures of mitigation of and adaptation to climate change. Meanwhile, they could also benefit from this opportunity, through which they could valorize important and unique cultural assets and relevant environmental resources. The idea is to foster new forms of community entrepreneurship, based on collective renewable energy actions involving citizens in the energy system, as “renewable energy communities” or “citizen energy communities” (EU 2018). This basically means adopting a social innovation approach, capable of promoting a democracy process for ensuring environmental and economic benefits to the whole community.

This is particularly true for inner areas of Southern Italy, which have experienced widespread implementation of large-scale renewable energy plants without the engagement of the local community in the planning processes. This has led to limited acceptance of new investment projects in renewable energy by the citizens.

In light of these premises, the aim of this chapter is to propose an operational approach for developing community entrepreneurship in inner areas, where the financial resources obtained from the production, distribution and consumption of green energy are locally reinvested to valorize the cultural and natural resources, activating a comprehensive process of social and economic revitalization.

2. Political Pathway for Energy Transition at International, European and Italian Levels

Nowadays, access to energy represents one of the most central challenges and opportunities the world has to tackle for ensuring employment, mitigation of climate change and food production.

Thus, by the second half of this century, it is necessary to move towards a more affordable and clean global energy system (i.e., from fossil-based to zero-carbon systems) (SDG Tracker 2021). This implies the start of the energy transition process, which requires public support through adequate policy frameworks and financial instruments.

Hennicke et al. (2019) claimed that “the energy transition resembles an inter-generational contract in which the current generation pre-finances a gradual replacement of the entire fossil and nuclear energy system in the 21st century with energy efficiency, energy saving and renewable energies, and organizes the implementation processes in order to protect children, grandchildren, future generations and developing countries and its people from the risks of a non-renewable energy system” (ibid., p. 4). It is an enormous challenge, which requires the active involvement and commitment of various levels of governance, from the supranational ones (i.e., UN, EU) to the lower levels (i.e., national, regional and local), which have to include all individuals and the territorial communities. Some important political initiatives have been launched in this direction. Figure 1 shows the overall framework linking the global, European and Italian levels.

The 2030 Agenda, developed by the United Nations (UN) in 2015, represents a universal action plan. It defines 17 Sustainable Development Goals (SDGs) and 169 targets as strategies “to achieve a better and more sustainable future for all” (UN—United Nations 2021).

Among them, SDG 7, Affordable and Clean Energy, emphasizes the importance of changing the route of energy production and consumption for contrasting climate change. Specifically, this implies the following: achievement of universal access to modern energy; increase in the global percentage of renewable energy; doubling the improvement in energy efficiency; promotion of access, technology and investments in clean energy; and expanding and upgrading energy services for developing countries. These are the five targets defined by the UN taking into account that 13% of the global population does not have access to modern electricity, that 3 billion people depend on wood, coal, charcoal or animal waste for cooking and heating and that energy is the main factor responsible for climate change, accounting for around 60% of total GHG emissions (IEA et al. 2019).

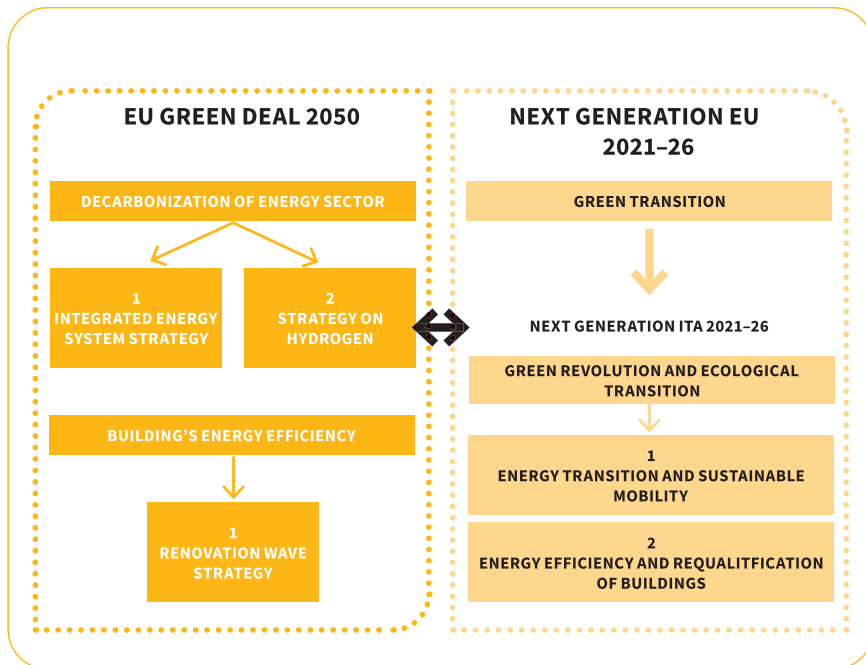


Figure 1. Main political initiatives for energy transition. Source: Graphic by authors, 2021.

In order to implement the UN 2030 Agenda, in 2019, the European Commission (EC) issued a plan called the Green Deal, a new growth strategy with the overarching aim of making Europe climate-neutral by 2050, through the deep decarbonization of all sectors of the economy (EC 2019). The approach consists of nine core policies that will bring tangible progress in the areas of the SDGs. Among them, “clean energy” specifically aims at decarbonizing the EU’s energy system. Indeed, over 75% of the EU’s GHG emissions come from the production and use of energy in the various economic sectors.

To reach this goal, some priorities have been identified, such as the increase in energy efficiency and use of renewable sources (RES). Regarding the latter, the strategy stresses the necessity of the transition from today’s energy system to an integrated one largely based on RES. As specified in the impact assessment for the Climate Target Plan for a 55% GHG reduction, the 2030 share of renewables must reach 38–40% (EC 2020), compared with the 1990 levels. The first strategy aims at developing an integrated energy system based on multiple energy carriers, such as electricity, heat, cold, gas, solid and liquid fuels, infrastructure and end use sectors,

such as buildings, transport or industry (EC 2020). The second strategy aims at a technology shift towards hydrogen, which refers to the production of hydrogen from RES and a subsequent deployment at a large scale through large-scale plants, above all large wind and solar plants (EC 2020).

Regarding the energy efficiency priority, particular attention is paid to buildings, taking into account that about 75% of the building stock is not energy-efficient, yet almost 85–95% of today's buildings will still be in use in 2050. Additionally, buildings are responsible for about 40% of the EU's total energy consumption, and for 36% of its GHG emissions from energy. Therefore, the renovation wave strategy has been launched for doubling the annual energy renovation rates in the next ten years both for public and private buildings (EC 2020).

Certainly, the implementation of the New Green Deal will be an important incentive to revitalize the European economy that has ended up in a deep recession following the pandemic crisis of COVID-19. This is why there is a profound link between the Next Generation EU-NGEU (known as the European Recovery Plan adopted in February 2021 following COVID-19) and the New Green Deal. In fact, it represents a temporary financial mechanism, for the period 2021–2026, to support reforms and investments promoted by member states, aimed at making European countries more sustainable, resilient and prepared for the challenges and opportunities of the ecological and digital transition (EU 2021). Indeed, among the six main pillars of the NGEU, one is dedicated to the green transition. In this regard, the president of the EC clarified that 37% of these funds will be allocated to green policies (i.e., expenditure related to climate change) in compliance with the systemic approach of the SDGs.

Specifically, the European Commission approved the Italian plan in June 2021 (Camera dei Deputati 2021). It identified six missions, among which the second one is related to the Green Revolution and Ecological Transition, aimed at improving the sustainability and resilience of the economic system, as well as ensuring a fair and inclusive environmental transition. It represents 31% of the total budget of the plan. This mission is structured in four components, in line with the European Green Deal, where two out of four are dedicated to the energy transition: (i) energy transition and sustainable mobility; and (ii) energy efficiency and building renovation.

Specifically, the first one is the component with the highest budget, equal to EUR 23.7 billion (40% of the total), and covers five lines of action: increase in the RES share in the system (biomethane, agrophotovoltaic, RES for energy communities, innovative RES plants, etc.); strengthening and digitalization of network infrastructure; promotion of the production, distribution and end uses of hydrogen;

developing more sustainable local transport; and developing international leadership at the industrial and research levels, as well as in the main transition supply chains.

Regarding the second component, with a budget of EUR 15.36 billion (29% of the total), there are three lines of action: energy efficiency of public buildings (schools); energy efficiency and seismicity of public and private residential constructions; and district heating systems (Governo Italiano 2021).

This new framework may represent a unique opportunity for the inner areas, as it may promote investments which are compatible with the potentials of rural regions and that local communities may activate. For instance, the renovation of public buildings or the realization of small-size energy systems may be the types of initiatives which can be easily carried out by the local community, by using the territorial resources and know-how and generating positive spillovers on the whole economic system.

3. Characteristics and Strategies of Inner Areas

The rapid economic growth from an economy based on agriculture towards the industrial sector, which occurred after World War II, has paved the way for a progressive migration of people from rural to urban areas. This rapid transformation has occurred due to better job opportunities, but also due to better opportunities to improve the quality of life, which could be captured by young and (relatively) most educated people.

This process occurred at different speeds across the EU territory and is still ongoing in rural areas, especially in those regions which are more isolated from urban areas and industrial settlements. In particular, local communities located in inner and mountainous areas are still dramatically shrinking, and there seems to be a lack of an effective strategy to contrast this phenomenon of depopulation and desertification with specific intervention policies. These areas are characterized by relevant distances from the main service centers (education, health and mobility). Specifically, in Southern Italy, they cover about 70% of the territory, underlining the importance to plan efficient policies and strategies.

The most important drivers of depopulation of rural areas have been widely investigated in the past (Zelinsky 1971). Among them, it is worth mentioning the transition from agricultural jobs (available in rural areas) to more appealing jobs of secondary and tertiary sectors (available in urban areas), which are socially more attractive, are well remunerated and offer some opportunities for career advancement. In addition, another important issue is related to the higher attractiveness of urban

areas, due to a higher availability of public goods and services (i.e., education, transportation, access to information).

Despite the fact that the declining importance of rural areas with respect to urban areas is a typical phenomenon commonly occurring in all countries, it is worth noting that the complete abandonment of rural areas is not desirable, as it may cause several problems for the whole society.

The recognition of several functions of rural areas dates back to the 1990s, with the Buckwell report (Buckwell 1997), arguing the importance of a substantial Common Agricultural Policy (CAP) reform aimed at rural development incentives and environmental and cultural landscape payments. The basic principle was that, beside agricultural goods, rural areas would also produce stable semi-natural eco-system services, which are greatly valued by the public. This was the basic idea of the European Model of Agriculture (Swinbank 1999).

After two decades of policy interventions, addressed at supporting rural development with agricultural policies (i.e., CAP) and regional policies, there still remains a gap between rural and urban areas, probably due to the failure of the classic top-down approach, where developing projects do not require the active involvement of local communities. The problem arises when exogenous models (e.g., the establishment of an industrial settlement) are introduced in a socio-economic context which is not suitable for enhancing its correct and sustainable functioning and, furthermore, for generating positive externalities and spillovers, with positive rebound effects on the whole territorial system. The lack of active participation of local communities has caused high costs for the whole society. In fact, the territory will mainly provide the basic resources for the industrial operations (e.g., natural resources, labor), while the value added will be mainly transferred elsewhere (Hubbard and Gorton 2011). The impact on the livelihood of the local economy will be negligible, and there will be only limited chances for the emancipation of the rural communities.

On the contrary, the novel approach adopted since the 1990s by the EU, by means of the bottom-up approach, with the LEADER programs, has introduced the concept that local communities are key players in maintaining a full connection between needs, resources and economic and social activities and represent the “social fabric” paving the way for long-term sustainable development (Shucksmith 2000).

In fact, the local community detains the property rights of local resources and embeds tacit knowledge, that is, information, skills and abilities which are needed to valorize low-value and highly heterogeneous local resources (e.g., different types

of biomass), according to development projects, which will preserve the territorial integrity.

Regarding the energy transition from fossil-based to zero-carbon systems, such as hydropower, wind power, solar radiation, geothermal and biomass, the involvement and active participation of the local community are crucial for several reasons. First, local resources are available at a low cost (e.g., labor, land). Second, the revenues generated with the new activities may activate the creation of new business opportunities and generate a multiplier effect and the revitalization of the local economy. Third, the extended redistributive effect of the project will facilitate the social acceptance of innovative initiatives, especially in the case of renewable energy, as rural communities do not urgently need the creation of additional sources of energy, while fearing the possible negative impacts on the environment and public health (Prosperi et al. 2019).

The well-known theoretical approach of total economic value is useful to grasp the relevance of the active involvement of the local community in the energy transition process, as it provides the basic understanding of different values which can be attributed to an economic good. This approach, widely used for the identification of different values of resources, goods and services (Adamowicz 1995; Perman et al. 2003), will help us to understand that the involvement of the local community may extend the value of renewable energy from the direct use value (i.e., revenue collected from the sale of energy) to many other categories of values. In short, the transition towards renewable energy systems, occurring with the engagement of the local community, will generate a multidimensional combination of impacts (Figure 2).

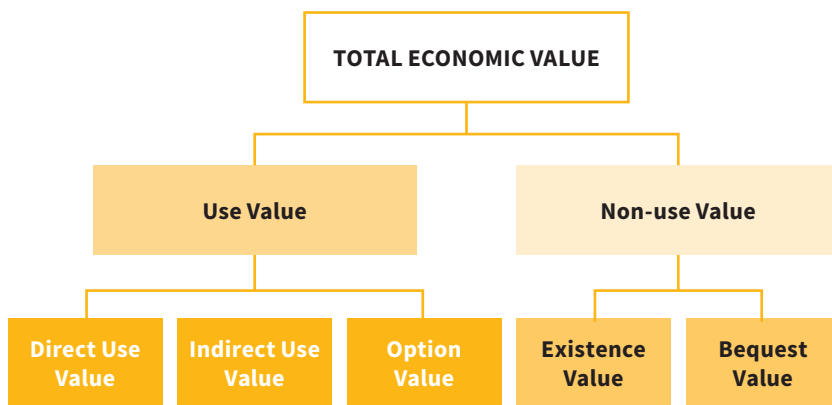


Figure 2. Conceptualization of total economic value. Source: Graphic by authors, 2021.

The total economic value of renewable energy can be conceived as the result of two categories of values: the use value, which is directly related to the generation of renewable energy, and the non-use value, which is more related to the wellbeing of local citizens.

The direct use value is quite self-evident, as it refers to the value of sales for the energy produced, to different types of consumers (i.e., households, public structures, industrial plants, commercial resellers).

The indirect use value may refer to the “greening effect” consequent to the reduction in carbon emissions and the impact that it may have on the reputation of the local community. Despite the fact that the local community may have a weak perception regarding to this type of value, it may be highly appreciated especially by the urban society, which is more sensitive towards global environmental problems.

The option value may refer to the strengthening of social ties and relationships (i.e., social capital), which provides the pre-condition for the development of further initiatives. Regarding the second group of values, they arise from the shared social dimensions (i.e., ethical and moral values) within the local community. The existence value refers to the higher level of wellbeing, which may be reached by a community when it proves it can undertake a global societal challenge (i.e., a rural community is able to achieve targets of renewable energy production and GHG reduction). The bequest value refers to the social preference towards innovative goods and services, which will (possibly) be beneficial to the future generations.

4. Community Entrepreneurship: The Italian Experience between Expectations and Disillusionment

The experience of community enterprise in Italy dates back to the 1960s, when its development spontaneously started from some bottom-up movements. A relevant example of an attempt to reinforce the local identity hindered by the massive depopulation of rural areas is the case of the small hamlet of Monticchiello (province of Siena, in Tuscany), where since 1967, theatrical performances have been held during the summer time to represent the changes affecting the local community over time (Andrews and Rosa 2005). The continuous confrontation among the community members paved the way to cooperative actions for facing common problems and new challenges.

Community enterprises have been developed in marginalized communities, characterized by large distances from lively urban settlements and profitable markets, and deprived of public services and infrastructure. The typical trends affecting these communities are aging, depopulation, economic stagnation, job insecurity, low income

levels, incapacity to valorize available resources, deterioration of infrastructure and ecosystems and degradation and loss of natural resources caused by abandonment (e.g., farmland, forests, water streams and reservoirs). In addition, the investment of big energy companies has worsened the situation by causing serious impacts on the landscape and loss of farmland due to the installation of large-scale wind and photovoltaic plants.

Commonly, these problems are typical of inner rural and mountainous areas, but they also occur in some urban areas and suburbs in less developed regions, such as the case of Southern Italy (Confcooperative—Confederazione Cooperative Italiane 2018a).

In these situations, the key driver triggering the emergence of a community initiative is represented by the marginality and the vulnerability of the territory. Another relevant driver is represented by the existence of a system of mutual relationships among individuals, organizations, the environment and cultural ties within the same territory. Consequently, the so-called “virtual communities” are not taken into account, as they refer to occasional and weak relationships established within the context of the global community, as in the case of experiences referring to a shared and collaborative economy (MISE e Invitalia—Ministero dello Sviluppo Economico e Invitalia 2016). According to Mori (2015), the link with a specific territory is the basic requirement characterizing community initiatives.

Another requisite of community enterprise generation relies on the unmet needs, difficulties or problems faced by the local community, which may arise from the changes occurring over time. For instance, in recent decades, in order to pursue the enhancement of the efficiency of national public expenditure, several public services have been deactivated in rural areas and relocated in urban areas. Similarly, the depopulation of rural areas caused the closure of small and traditional firms and shops, with unavoidable consequences on the availability of job opportunities for local people, or, in some cases, the loss of symbolic social aggregation places (e.g., the closure of the last bakery shop or the largest manufacturing plant) (Confcooperative—Confederazione Cooperative Italiane 2018). Certainly, along with the closure of economic activities, the disappearance of other social institutions (e.g., civic association, political groups, sport clubs, parish) which play an important role for the aggregation of individuals and families may also occur.

The reaction against these difficulties requires the identification of strategies based on the valorization of idle local resources (material and immaterial common goods), that is, resources that are not used for any purpose, or resources that are inefficiently and unprofitably used. Furthermore, a system of strategic partnerships

and social networks within the local community, and also with external agents, is the basic premise to activate an innovation process. A spontaneous process of revitalization of the local community cannot be expected, but, on the contrary, a promoting group of actors (i.e., a clique) may actively and deliberately pursue a transformation path, leading to the engagement of the community members in the definition of the vision and the mission of the community enterprise. The role of local public institutions is highly relevant, as they may endorse the initiative and they may also provide some asset to favor the establishment of the enterprise. In addition, local institutions may activate some public tendering regarding the provision of essential services, which will contribute to the business consolidation of the enterprise (Confcooperative—Confederazione Cooperative Italiane 2018).

The most relevant type of community enterprise diffused in Italy is the “cooperative of the community”, whose diffusion has been moderately increased since the beginning of the 2000s. In fact, several Italian regional governments have enacted some specific regulations in order to promote its diffusion and strengthening. For instance, the Apulia region was among the first Italian regions enacting a specific regulation in this matter in (Bollettino Ufficiale della Regione Puglia n. 66 del 26/05/2014). However, at present, a national legislation is still missing, and, consequently, it is difficult to adequately monitor the diffusion process.

The cooperative of community seems a promising approach to address the development of marginal areas (Mastronardi et al. 2020). In fact, it can be conceived as a bottom-up initiative through which it is possible to boost social innovation, with the main purpose of satisfying local unmet needs, and to overcome the limitation of public interventions. In fact, the current public policy seems to be ineffective in addressing the problems of less favored areas. Similarly, it cannot be expected that the private sector, while pursuing market competitiveness and the maximization of profits, may always perform better than the public sector.

It appears that the expectations towards the cooperative of community are excessively optimistic. At present, there are still too limited successful cases confirming the adequacy of the model to face the development problems of regions lagging behind. Furthermore, there is still a literature gap regarding the lessons to be learned, in terms of possible solutions applied in different contexts (Bodini et al. 2016). In this regard, the adoption of evaluation tools would be desirable in order to perform economic assessment and social accountability of different initiatives, similar to what is occurring in the non-profit sector (i.e., the third sector) (Ministero del Lavoro e delle Politiche Sociali 2019). The evaluation exercises would be useful to verify the effects of the cooperation in the local context in which they operate.

The main features of the cooperative of community, which are included in the current legislation, are the following:

- It is an enterprise able to use idle and common resources, and to offer a steady and continuous provision of goods and services mainly to the local community;
- The membership is open, according to inclusive and democratic criteria;
- The cooperative is well rooted in the community, as its objective is the amelioration of the quality of life of the local community, conceived as the social group of the residents of a certain territory and people sharing values, culture and identity enshrined within a place, monuments, interests, resources and projects;
- The cooperative must guarantee that the provision of goods and services is accessible by the whole community (Bodini et al. 2016).

Despite the great expectations for the cooperative of the community, the Italian experience has not always been positive. The most frequent causes of failure are related to the incapacity of the management group in identifying an adequate business model through which to pursue the financial sustainability of the company, in order to guarantee the provision of goods and services to the local community. In fact, in several cases, the revenue of the cooperative mostly relies on public subsidies and contracts for public procurements, which are uncertain and discontinuous, as they derive from the political process. In addition, when the cooperative is too concentrated on public support, it lacks the capacity to adapt to the market conditions, and the emergence of economic inefficiencies. In other words, the cooperative, instead of acting as a firm, will gradually become similar to a public institution. Therefore, successful cases demonstrate that cooperatives have pursued financial sustainability through business diversification, including the market opportunities existing outside the local community (i.e., provision of goods and services to customers not belonging to the community) (MISE e Invitalia—Ministero dello Sviluppo Economico e Invitalia 2016).

Another strategy relies on the consolidation of a core business capable of ensuring a constant revenue stream through which to finance the general economic activity of the cooperative and provide either the ability to establish some investments (i.e., training of personnel, elaboration of new projects) or offset the temporal lag existing between the cost anticipation and the collection of payments (i.e., cash flow stabilization). For instance, almost all Italian cooperatives of community are involved in rural tourism activities, which are highly seasonal, or the organization of cultural activities and services, which are precarious and unprofitable but are still highly beneficial for the local community, in order to reinforce the cohesion among the

population, and to create the conditions for the economic development of the territory. This is the reason why Italian cooperative communities rarely report successful stories. However, there are some instances of successful stories such as the case of the cooperative of Melpignano (in the Apulia region), which has been considered a best practice. In fact, it has been focused on the core business of energy production from renewable sources and represents an exemplary case for sustainability and profitability.

In this context, the energy transition towards renewable energy represents a very important opportunity which could be captured by rural communities, as they may be able to use local resources (e.g., agricultural and forest biomass, solar energy) with relatively small investments, but facing a constant and reliable demand, capable of generating a considerable amount of revenue flow. In this way, the energy transition will boost community entrepreneurship, will generate a positive impact on the local economy and will (indirectly) support the social wellbeing of the community.

A Cooperative of Community for Energy Transition: Bovino Municipality Case Study

The orientation of global policy makers to favor and support, through specific strategies, the energy transition towards more sustainable and accessible production systems may represent an important development opportunity for the communities of the inner areas of Southern Italy. Very soon, they will have to choose either to be protagonists of these changes, exploiting the opportunities offered by this paradigm shift in the energy sector, or to continue in passively suffering the effects. In the past, the populations of these territories have, indeed, been subjected to the consequences of energy policies at the national level without being able to participate in the decision-making processes which have defined and implemented these policies. Consequently, the realization of renewable energy plants (both photovoltaic and wind) by large industrial companies, as well as modifying the landscape aspect and compromising the naturalistic profile of these territories, was experienced by local populations as an exploitation of resources. Actually, the resulting benefits belonged to few people, and there was not an adequate refreshment system for mitigating the suffering. Thus, there was a rising natural distrust of local communities towards any attempt to address the energy issue, also in terms of local development. This is reminiscent of the importance of the local communities' social acceptance. This is a relevant determinant of the development of renewable energy systems because its absence can cause delays or even the abandonment of innovative projects. In other words, community engagement and the democracy of the energy policy processes at

the local level have to be favored above all in this transition phase, learning by past mistakes (Prosperi et al. 2019).

In this section, the authors describe the experience of the Generative Communities project, funded by the local government of the Apulia region, in Southern Italy, under the public call Cooperative of Community 2018. This call aimed at supporting the establishment of new community-type entrepreneurial realities. The initiative, promoted by the CRESCO training department of Confcooperative Foggia¹, in partnership with the municipality of Bovino and two local non-profit organizations, concerned the creation of a participatory path in favor of the population of a small inner area community (Bovino) to achieve the basic requirements needed for the establishment of a local “cooperative of community” that would be, at the same time, an energy community for self-production and local distribution of renewable energy (see the EU Directive 2018/2001).

Bovino is a mountain municipality in the province of Foggia (Apulia region) with a population of 3256 inhabitants, included in the inner areas of the “Monti Dauni”. Indeed, it is located 37 km northwest of the provincial capital Foggia (Figure 3).

Similar to most municipalities located in mountainous areas, Bovino has shown a constant decline in the number of residents in the last twenty years, overall equaling 20% (Istat 2020). Its main economic sectors are agriculture and services (commercial activities and professional firms) (IPRES 2016). All these factors denote the existence of territorial problems related to the marginalization of the area from the main lines of development with consequent phenomena of de-anthropization, economic decline and strong social hardship, as reported in Figure 4.

In this context, the model proposed by the authors, as reported in the Generative Communities project, aims at contributing to the improvement in the local socio-economic situation by reactivating the “local” economy, essentially leveraging latent territorial capital and the offer of some services to the resident population. The main development assets are based on the energy sector and cultural heritage.

The value proposition is to transform the endurance of the local community, meant as a passive adaptation to conditioning coming from outside the reference community context (selective market outcomes, consequences of administrative reorganization, etc.), into resilience, that is, a proactive attitude of catching opportunities, essentially by leveraging the territorial capital. The main impact,

¹ Representative body of cooperatives in the province of Foggia.

expected at the local level, is mainly concerned with the empowerment and capacity building of the local community and the organizations involved.

The participatory approach consisted of the following steps:

- a. Public forum, open to the whole community, to favor the engagement of citizens;
- b. Focus groups with representatives of different stakeholders, to focus on the main strategic orientation of the cooperative of community;
- c. Expert committee, in order to analyze and perform a screening of proposals emerging from the focus groups, by considering the capacity and the resource endowment (project tailoring).

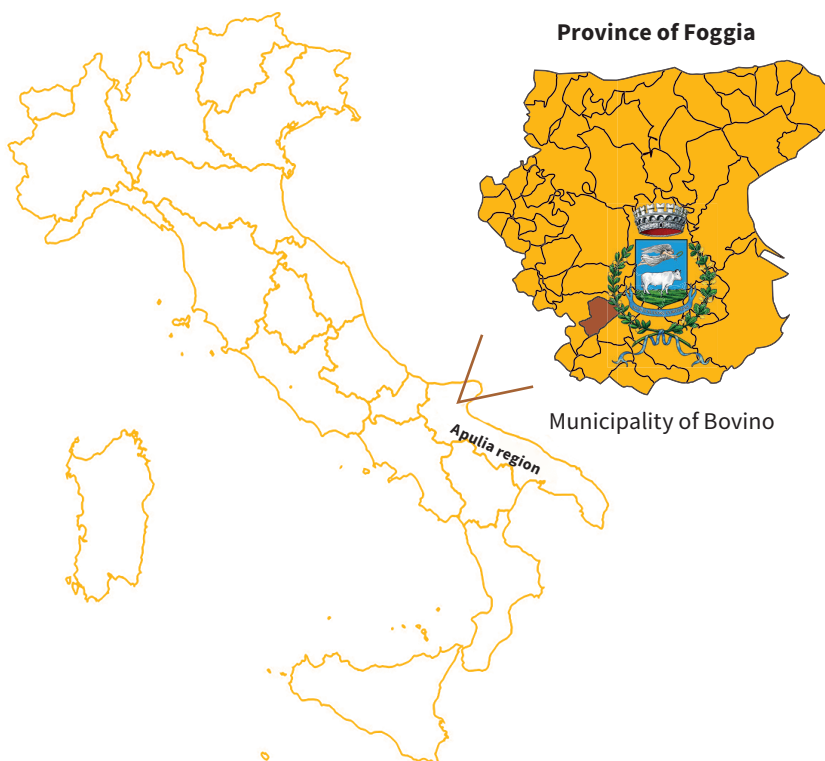


Figure 3. Location of the municipality of Bovino. Source: Graphic by authors, 2021.

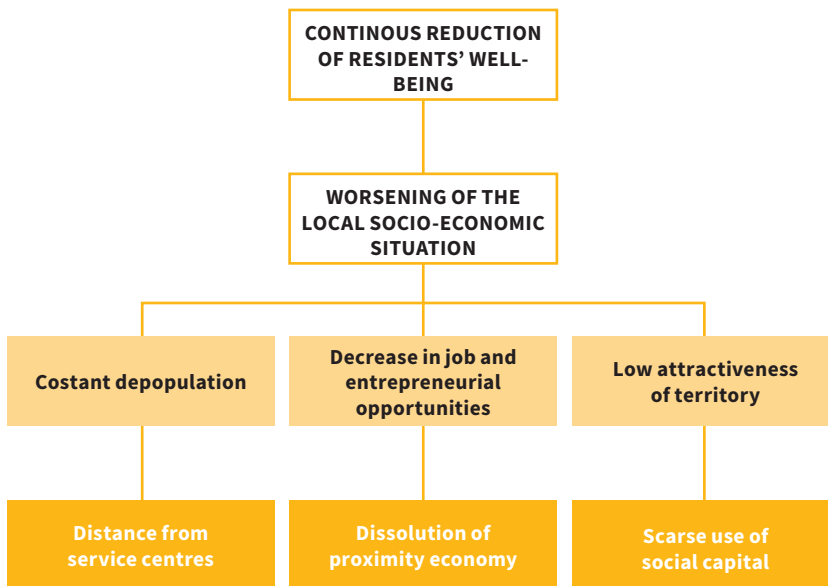


Figure 4. Typical issues of a rural marginalized area such as Bovino. Source: Graphic by authors, 2021.

The technical committee examined and selected the proposals coming from the participatory process for formulating some valid operational areas, which, coherently with the identified strategies, were suitable for the local context. This last phase represents the novelty of this process.

The project, which started in September 2019, has been structured in six phases, as reported in Table 1.

It is worth noting that the feasibility study, based on the energy balance, is a very important document for the whole sustainability of the cooperative. The drafting of the feasibility plan, relating to the investment in the energy sector, has been completed thanks to the information provided by the energy balance of the municipality and the suggestions derived from the thematic round tables.

From the experience acquired from this case study, it is possible to underline how this specific participatory approach has changed the general attitude of the community.

During the focus groups, some interesting results emerged from the participants' dialogues (30 informed individuals). In general, they expressed a strong distrust towards renewable energy plants managed by multinational companies. The main reason for this mistrust and opposition is due to the imbalance between

the exploitation of local resources (mainly the landscape and farmland) and the economic compensation granted to the communities.

Table 1. Synthesis of the activities undertaken during the project.

Phase	Technique	People Involved
Participatory design	Forum, focus groups, technical committee (7 experts)	50 people attending the forum; 30 people participating in focus groups
Identification of a promoting group	Self-selection spontaneously occurred during the public events	15 people
Balance of competences of the cooperative founders	Evaluation of competences, skills and experiences, operated by the expert committee (2 members)	15 people
Training course	Lectures and study trip to other rural areas (100 hours)	13 people
Feasibility study based on the energy balance	Study performed by the expert committee (4 experts)	-
Dissemination of results	Open conference	50 people

Source: Table by authors, 2021.

On the contrary, at the end of the Generative Communities project, there was a radical change in attitude. In fact, during the final conference (through the open debate with 50 participants), it emerged that the acceptability of the renewable energy plants would significantly increase if there were more economic benefits for the community or if they are involved in the plants' management.

This change may be explained as follows: the ways in which citizens are effectively involved in the planning process; transparency and circulation of information; the development of the empowerment of organizations and individuals. In fact, with reference to the last aspect, the initiative has contributed to increasing the ability to influence and activate change through a process of participation, empowerment and awareness. Furthermore, it has facilitated a process of capacity building, that is, the construction of individual and collective skills, as well as the strengthening of the social cohesion of the community, which is also an intergenerational key.

Consequently, the proposed and implemented methodology can represent a useful tool to facilitate the energy transition in inner areas in terms of local development, overcoming the distrust of local communities, which, in this context, can assume the role of the driver of innovation and change.

5. Concluding Remarks

The energy transition is a technological change based on the shift from fossil to renewable sources, which may represent a unique opportunity for the development of marginalized rural areas and may generate multiple benefits for local communities. In fact, rural areas are endowed with abundant idle resources that are suitable for generating renewable energy, such as residual biomass from agriculture, agro-industry and forestry, and locations for the siting of geothermal, wind and solar energy plants. The operations needed for energy conversion may revitalize the local economy, by creating new job opportunities and by generating new sources of income.

The energy transition may be pursued according to two different approaches, that is, the typical top-down approach, where the investments are exogenous and the local community is marginally involved in the decision making, and the bottom-up approach, where the local community is engaged during all stages of the project development.

In this chapter, several arguments supporting the advantages arising from pursuing the bottom-up approach and, in particular, the formation of community enterprises were presented. First, the engagement of the local community may ease the social acceptance of new investments, leading to a reduction in transaction costs arising from opportunistic behavior, asymmetric information and idiosyncrasy. In fact, the local community, having a better understanding and knowledge of the local resources and having skills, know-how and capabilities to use them in more efficient and effective ways, may find low-cost and sustainable solutions. Second, the members of the local community may become, through community entrepreneurship, active actors of the energy generation, distribution and consumption processes, enabling them to revitalize their local economy and be able to consolidate a core business capable of ensuring a constant revenue stream, through which they can finance some precarious and seasonal activities and services which, though financially unprofitable, may be highly beneficial for the local community, in order to reinforce the cohesion among the population, and to create the conditions for the economic development of the territory.

The lesson learned from the study case of the municipality of Bovino is that the engagement of the local community in the energy transition process is not

spontaneous, and that many efforts are needed in order to activate the public debate and to let citizens find their own solutions. Unfortunately, in the context of escalating social, environmental and economic challenges, business as usual, based on the top-down approach, and the introduction of exogenous industrial and business models are not suitable for pursuing a viable long-term development strategy. In addition, after several programming cycles occurred in the past, there is a risk of disillusionment and “community burn-out”, leading to a diffused and generalized social opposition towards new development projects, which are worsening the already poor conditions of inner areas.

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References

- Adamowicz, Vic. 1995. *Alternative Valuation Techniques: A Comparison and Movement to a Synthesis*. In *Environmental Valuation: New Perspectives*. Edited by K. Willis and J. Corkindale. Oxford: CAB International.
- Andrews, Richard, and Alberto Asor Rosa. 2005. *Teatro Povero di Monticchiello 1967–2004. Atto I*. Edited by R. M. Trentadue and U. Bindi. Montevarchi: Aska Editions, pp. 1–96.
- Bodini, Riccardo, Carlo Borzaga, Pierangelo Mori, Gianluca Salvatori, Jacopo Sforzi, and Flaviano Zandonai. 2016. *Libro bianco—La Cooperazione di Comunità, Azioni e Politiche per Consolidare le Pratiche e Sbloccare il Potenziale di Imprenditoria Comunitaria*. Trento: Euricse Publisher, pp. 1–84.
- Buckwell, Allan. 1997. *Towards a Common Agricultural and Rural policy for Europe*. Reports and Studies, No 5. Brussels: European Commission Directorate General for Economic and Financial Affairs DGII.
- Camera dei Deputati. 2021. Il Piano Nazionale di Ripresa e Resilienza (PNRR). Available online: <https://temi.camera.it/leg18/temi/piano-nazionale-di-ripresa-e-resilienza.html> (accessed on 10 September 2021).
- Confcooperative—Confederazione Cooperative Italiane. 2018a. La Cooperativa di Comunità: Un Circolo Virtuoso, Collana “Strumenti” n. 5. pp. 1–43. Available online: <http://www.fontecchio.gov.it/wp-content/uploads/2018/02/N.5-La-cooperativa-di-comunita.pdf> (accessed on 10 April 2021).

- Confcooperative—Confederazione Cooperative Italiane. 2018. *Processi Generativi di Sviluppo Territoriale: La Dimensione Comunitaria*, Collana “Strumenti” n. 8. pp. 1–39. Available online: <https://lavoro.chiesacattolica.it/wp-content/uploads/sites/27/2019/07/09/TENEGGI-Processi-di-sviluppo-territoriale.pdf> (accessed on 10 April 2021).
- Ministero del Lavoro e delle Politiche Sociali. 2019. *Decreto del Ministero del Lavoro e delle Politiche Sociali del 23 Luglio, 2019. Linee Guida per la Realizzazione di Sistemi di Valutazione Dell’impatto Sociale delle Attività Svolte Dagli enti del Terzo Settore*, Gazzetta Ufficiale Serie Generale n. 214 del 12/09/2019. Available online: <https://www.gazzettaufficiale.it/eli/id/2019/09/12/19A05601/sg> (accessed on 10 April 2021).
- EC. 2019. *Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions—The European Green Deal*, Brussels, 11.12.2019 COM (2019) 640 Final. Brussels: EC.
- EC. 2020. *Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Renewable Energy Progress Report*, Brussels, 14.10.2020 COM (2020) 952 Final. Brussels: EC.
- EC. 2020. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Powering a Climate—Neutral Economy: An EU Strategy for Energy System Integration* COM/2020/299 Final. Brussels: EC.
- EC. 2020. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions a Hydrogen Strategy for a Climate—Neutral Europe* COM/2020/301 Final. Brussels: EC.
- EC. 2020. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions a Renovation Wave for Europe—Greening our Buildings, Creating Jobs, Improving Lives* COM/2020/662 Final. Brussels: EC.
- EU. 2018. Directive 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the Promotion of the Use of Energy from Renewable Sources. Available online: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L2001&from=fr> (accessed on 5 May 2021).
- EU. 2021. Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 Establishing the Recovery and Resilience Facility. *Official Journal of the European Union* L 57: 17–75.
- Governo Italiano. 2021. *Piano Nazionale di Ripresa e Resilienza—#NEXTGENERATIONITALIA*. Available online: https://www.governo.it/sites/governo.it/files/PNRR_0.pdf (accessed on 19 May 2021).
- Hennicke, Peter, Jana Rasch, Judith Schröder, and Daniel Lorberg. 2019. *The Energy Transition in Europe: A Vision of Progress*, Wuppertal Spezial, No. 54, Wuppertal Institut für Klima, Umwelt, Energie, Wuppertal. Available online: <http://nbn-resolving.de/urn:nbn:de:bsz:wup4-opus-73368> (accessed on 4 May 2021).

- Hubbard, Carmen, and Matthew Gorton. 2011. Placing agriculture within rural development: Evidence from EU case studies, *Environ. Plann. C: Gov. Policy* 29: 80–95.
- IEA, IRENA, UNSD, WB, and WHO. 2019. Tracking SDG 7: The Energy Progress Report 2019. Washington DC. Available online: <https://trackingsdg7.esmap.org/data/files/download-documents/2019-Tracking%20SDG7-Full%20Report.pdf> (accessed on 5 May 2021).
- IPRES. 2016. Imprese Attive e Localizzazioni D'impresa. Available online: <https://www.ipres.it/it/news/item/49-impres-e-addetti-in-puglia-2016> (accessed on 17 April 2021).
- Istat. 2020. Popolazione Residente al 1° Gennaio: Puglia. Available online: <http://dati.istat.it/Index.aspx?QueryId=18550> (accessed on 17 April 2021).
- Bollettino Ufficiale della Regione Puglia n. 66 del 26/05/2014. Available online: <http://burp.regione.puglia.it/documents/10192/4806320/LEGGE+REGIONALE+20+maggio+2014%2C%20n.+23+%28id+4806333%29/4ae8b341-640f-4e7b-be57-f48c694d87ff;jsessionid=C4D05BB4DF54C823E19A4943604050A1> (accessed on 15 April 2021).
- Mastronardi, Luigi, Maria Giagnacovo, and Luca Romagnoli. 2020. Bridging regional gaps: Community-based cooperatives as a tool for Italian inner areas resilience. *Land Use Policy* 99: 104979. [CrossRef]
- MISE e Invitalia—Ministero dello Sviluppo Economico e Invitalia. 2016. *La Cooperazione di Comunità per uno Sviluppo Locale Sostenibile. Studio di Fattibilità su “Lo Sviluppo delle Cooperative di Comunità” —Report Finale*. Roma: MISE e Invitalia, pp. 1–280. Available online: <https://www.cooperativedicomunita.confcooperative.it/Portals/0/News/INVITALIA-LA%20COOPERAZIONE%20DI%20COMUNITA-Report%20finale.pdf> (accessed on 20 May 2021).
- Mori, Pier Angelo. 2015. *Community and Cooperation: The Evolution of Cooperatives towards New Models of Citizens' Democratic Participation in Public Services Provision*. Trento: Euricse, pp. 1–25.
- Perman, Roger, Yue Ma, James McGilvray, and Michael Common. 2003. *Natural Resource and Environmental Economics*, 3rd ed. Boston: Pearson Addison Wesley, pp. 1–699.
- Prosperi, Maurizio, Mariarosaria Lombardi, and Alessia Spada. 2019. Ex ante assessment of social acceptance of small-scale agro-energy system: A case study in southern Italy. *Energy Policy* 124: 346–54. [CrossRef]
- SDG Tracker. 2021. Ensure Access to Affordable, Reliable, Sustainable and Modern Energy for All. Available online: <https://sdg--tracker.org/energy> (accessed on 10 May 2021).
- Shucksmith, Mark. 2000. Endogenous development, social capital and social inclusion: Perspectives from LEADER in the UK. *Sociologia Ruralis* 40: 208–18. [CrossRef]
- Swinbank, Allan. 1999. CAP reform and the WTO: Compatibility and developments. *European Review of Agricultural Economics* 26: 389–407. [CrossRef]

- UN—United Nations. 2021. The Sustainable Development Agenda. Available online: <https://www.un.org/sustainabledevelopment/development--agenda/> (accessed on 5 April 2021).
- Zelinsky, Wilbur. 1971. The hypothesis of the mobility transition. *Geographical Review* 61: 219–49. [CrossRef]

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