The Resilience Approach Contribution to Rural Communities Social Assessment for Social Sustainability-Based Strategies Implementation[1]

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Abstract

Evaluating the rural communities social context capacity to manage changes coming from external agents is of paramount importance for effective Social Sustainability strategies identification.
A literature survey was carried out on the Resilience approach definition and its application to the Social Assessment in rural areas. The analysis showed that the Resilience approach is dynamic and context-dependent. It enriches the Social Assessment by focusing on the specific capabilities of the communities in managing changes. The Resilience perspective embraces the dynamic character of communities and human-ecosystem interactions outlining multiple potential pathways. It provides a deeper understanding of how a community's positive response to change can be strengthened and supported. Moreover, the specific focus on rural communities highlights how strongly Social and Ecological Resilience are intertwined in the identification of the mechanisms that guarantee Social Sustainability which, in turn, is strictly interrelated with Environmental and Economic Sustainability.

Keywords: *Social Assessment, Resilience, Sustainability, Rural Communities, Food System*

1 Introduction

Within the three pillars of Sustainability (Economic, Environmental, Social), the Social dimension has been receiving research attention only fairly recently. Central governments and local public institutions, as well as the private sector, are showing an increasing interest in the topic. The development of sustainable communities all over the world is also receiving the attention and the support of governments and research institutes (Dillard, Dujon, King, 2009).
To implement strategies supporting a community sustainability both in social and environmental terms, a social assessment is necessary.
Social assessment is a process of collecting, organising and analysing information about a community. The social assessment process ensures that social issues are considered in the implementation of a new policy or other change (Rietbergen-McCracken and Narayan, 1998). A social assessment is conducted using social analysis, evaluation and monitoring through processes of stakeholders engagement (Taylor et al. 1995). Public involvement and community engagement are integral parts of social assessment, and are essential for its success. In conducting a social assessment, information is collected on the community's social characteristics, its organization, the relationships between different groups within the community and how those different groups take decisions. To understand these community characteristics, a social assessment usually collects information on population characteristics, social organisation, community history, lifestyles, community resources, and attitudes, beliefs and values (Burdge and Vanclay, 1995).
Given the present global context, characterized by a multiple and fast succession of events, it's becoming evident how the ability of facing changes is fundamental for a community's survival.
Rural areas, in particular, show common traits that make them vulnerable to changes. Since the provision of natural resources is under increasing pressure due to economic instability, continuing population growth, competing claims on land, and climatic challenges, attention for adaptation towards change is growing.

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Non-sustainable practices, perpetrated for years in rural areas make sustainability-based policies necessary. The impact of these policies is particularly relevant in developing countries and is going to affect the rural communities, where unsustainable practices defined new equilibria among the different stakeholders.
Social assessment, anyway, shows some limitations in describing the impact of change in a community. As stated by Burdge and Vanclay: "*Social assessment practitioners have identified a range of 'indicators' that can be used to identify areas of possible vulnerability; these indicators are generally focused on the negative or weak aspects of a community. However, communities and their characteristics and systems are dynamic and are made up of many interrelated processes, and therefore, social changes are particularly difficult to capture through vulnerability-based indices*" (Burdge and Vanclay, 1995).
In these contexts, while implementing the social assessment of a rural community, a relevant contribution can be given by the resilience approach. This approach in fact "*Rather than focusing on the potential points of weakness, […] identifies the resources and adaptive capacities that a community can utilize to overcome any problems that may result from change. […] rather than relying on external interventions to overcome vulnerabilities, a resilience approach builds upon the capacities (resources, flexibility) already established within a community. The resilience perspective embraces the dynamic character of communities and of human-ecosystem interactions, considering their multiple potential pathways*" (Maguire and Cartwright, 2008).
This approach can be particularly suitable when applied in studies facing the topic of sustainability, where social, environmental and economic aspects are integrated.
Social Resilience could provide an interesting integration to social assessment supporting the analysis and implementation of sustainability strategies also in rural areas. In rural communities, a growing attention is now addressed also to support small farmers sustainability and market access, given their active role in facing the food crisis.

Consequent to these considerations the **aim of the present study** is to analyze if social resilience can be integrated into the social assessment of rural communities, with the aim of implementing sustainability-oriented policies and strategies.

2 Materials and Methods

The study was conducted through a literature review. The papers analysed refer to the definition and fields of application of the social resilience approach. The results of the review are organized to provide an overview of the different definitions of Resilience, the theoretical and methodological approaches to its assessment and implementation in different contexts with a focus on rural communities and food systems. Finally a definition of the contribution of Resilience to the Social Assessment, and more in general to the Sustainability framework, will be provided.

3 Results

3.1 Origins of the term resilience and first applications

"*The term resilience was first applied to ecosystems by Holling (1973) and based on his work, as well as the work of organizations such as the Resilience Alliance and the Stockholm Resilience Center, resilience has become an important concept in the global dialogue on climate action*" (UNESCAP, 2008).
According to Carl Folke "*the resilience perspective was revived in the early 1990s through research programs of the Beijer Institute, where it came across as essential in interdisciplinary studies on biodiversity (Perrings et al., 1995; Folke et al., 1996), complex systems (Costanza et al., 1993), property rights regimes (Hanna et al., 1996; Berkes and Folke, 1998) cross-level interactions and the problem of fit between ecosystems and institutions (Folke et al., 1998; Costanza et al., 2001) and in relation to economic growth and socioeconomic systems (Arrow et al., 1995; Levin et al., 1998). As a consequence, the Beijer Institute and the University of Florida, where Holling was located, started the Resilience Network, a research program that later developed into the Resilience Alliance (www.resalliance.org) with its journal Ecology and Society*" (Folke, 2006).

3.2 Present definitions of Resilience

A more recent study, conducted by Maguire and Cartwright, provides an overview of the origins and different perspectives of resilience, including an updated definition of its approach. The study states that "*the resilience approach identifies the resources and adaptive capacity that a community can utilize to overcome the problems that may result from change. The approach builds upon the inherent capacities of a community, rather than only relying on external interventions to overcome vulnerabilities*" (Maguire and Cartwright, 2008).
The study also discusses the relationships between vulnerabilities, adaptive capacity and social resilience, which are defined as follows:

- **Vulnerabilities**: the components which may weaken a community's ability to respond adaptively to a change.
- **Adaptive capacity:** the resources and ability of a community to cope with change
- **Social resilience:** the ability of a community to adaptively respond to change rather than simply returning to a pre-existing state (Maguire and Cartwright, 2008).

This last definition is partially new, since most of the researchers still consider the resilience as the capacity of returning to the state previous the change.
Some of the most common definitions of resilience are reported below:

- "*A measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables*", as applied to ecosystems;
- "*The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self organization and the capacity to adapt to stress and change*", as applied in the context of climate change;
- "*The ability to absorb disturbances, to be changed and then to re-organize and still have the same identity (retain the same basic structure and ways of functioning). It includes the ability to learn from the disturbance*", as applied to socio-ecological systems (UNESCAP, 2008).

Different definitions of Resilience imply different analytical perspectives which can be summarized into three major views/categories:

1. Resilience as stability: Buffer capacity
2. Resilience as recovery: Bouncing back
3. Resilience as transformation: Creativity

(Adger, 2000; Folke, 2006; Maguire and Hagan, 2007)

A common aspect in all perspectives is the ability to withstand and respond positively to stress or change.
Resilience as stability
This view, developed from early ecological studies, defines resilience as the ability to return to a pre existing state. This view of resilience is measured as the amount of disturbance a system can tolerate ('absorb') before it shifts to another state (Holling, 2003 in Folke, 2006, p.254).
Resilience as recovery
The recovery view of resilience relates to a community's ability to 'bounce back' from a change or stressor to return to its original state. Resilience here is measured as the time taken for a community to recover from a change (Maguire and Hagan 2007; Pimm 1984).
The stability and recovery views of resilience have a deterministic understanding of resilience in that they see a community (or an individual, or an ecological system) is seen as having an inherent character which enables it (or does not enable it) to cope with a stressor. This view implies that a community as a whole either is or is not resilient. It fails to take into account the dynamic nature of change and communities, which is recognised in the third view: resilience as transformation (Maguire and Cartwright, 2008).
Resilience as transformation
This more recent view considers social resilience to be the capacity of a community to respond to a change *adaptively*. Rather than simply returning to a pre-existing state, this can mean changing to a new state that is more sustainable in the current environment. For example, an agriculture-based rural community may

develop different economic activities (e.g. tourism) or innovative farming practices that better suit the current environment. The transformation view of resilience is concerned with concepts of renewal, regeneration and re-organisation (Folke 2006). Folke argues that "in a resilient social-ecological system, disturbance has the potential to create opportunity for doing new things, for innovation and for development". A resilient community is able to use the experience of change to continually develop and to reach a higher state of functioning. Rather than simply 'surviving' the stressor or change, a resilient community may respond in creative ways that fundamentally transform the basis of the community. This perspective recognises that given the dynamic character of communities, they are unlikely to return to a pre-existing state, but will transform in an adaptive way to external change.
Social resilience recognizes the powerful capacity of people to learn from their experiences and to consciously incorporate this learning into their interactions with the social and physical environment. This view of resilience is important because it acknowledges that people themselves are able to shape the 'trajectory of change' (Herreria *et al.* 2006) and play a central role in the degree and type of impact caused by the change.

Resilience multidimensional character
Other authors focus on the complex character of Resilience stating that it is more than the ability to adapt to a change; resilience involves transformation, encompassing the capacity for learning, innovation, renewal, re-organisation (Folke, 2006) and attainment of a state that is sustainable in the current (social, political, biophysical) environment (Maguire and Cartwright, 2008).
The multidimensional nature of sustainability is recognized once resilience is considered as having economic, political, spatial, institutional and social dimensions (Adger, 2000).

Resilience vs vulnerability
"*While social assessment practitioners have identified a range of 'indicators' that can be used to identify areas of likely problems, these indicators are generally focused on the negative or weak aspects of a community. However, communities and their characteristics and systems are dynamic and are made up of many interrelated processes, and therefore, social changes are particularly difficult to capture through vulnerability-based indices (Burdge and Vanclay 1995). Instead of attempting to predict specific changes, a resilience approach accepts that change is inevitable and unpredictable. Rather than focusing on the potential points of weakness, the resilience approach identifies the resources and adaptive capacities that a community can utilize to overcome any problems that may result from change. A crucial difference is that rather than relying on external interventions to overcome vulnerabilities, a resilience approach builds upon the capacities (resources, flexibility) already established within a community"* (Maguire and Cartwright, 2008).
This focus on resources and capacities does not ignore the components of a community which may be vulnerable to a particular change. The resilience approach is balanced in that it includes both the vulnerabilities within a community as well as the resources and adaptive capacities which enable the community to overcome these vulnerabilities and manage change in a positive way (Folke, 2006).

Resilience dynamic character
The resilience perspective embraces the dynamic character of communities and human-ecosystem interactions and sees multiple potential pathways within them. It provides a powerful way of understanding how a community's positive response to change can be strengthened and supported (Maguire and Cartwright, 2008).
The social resilience approach is a way of understanding dynamic systems of interaction between people and the environment (Folke, 2006).
As already reported, "*social resilience has economic, political, spatial, institutional and social dimensions*" (Adger, 2000). These dimensions are mirrored in the communities structure and behavior.
A resilient community is then able to respond to changes or stress in a positive way, and is able to maintain its core functions as a community despite those stresses. A particular change may have vastly different consequences in different communities, and different communities will demonstrate different degrees of resilience to the change (Kelly, 2004).

Given the above mentioned characteristics of communities, the resilience model naturally needs to be dynamic and context-dependent: the ways in which processes occur will vary between communities and within the same community in response to different types of change (Brooks, 2003).

3.3 Analytical approaches to resilience

Resilience analysis, in particular its assessment, can be made difficult, as stated by the Resilience Alliance :
"*Given the dynamicity of a community's resilience and its continuous evolution, an assessment of resilience is never complete. It must be revisited regularly as system dynamics change and as understanding grows. [It is] a process, rather than… a final product*" (Resilience Alliance, 2007).
Two studies considered possible ways of assessing resilience.
The more recent is a six step process for a resilience based social assessment, suggested by Maguire and Cartwright (Maguire and Cartwright, 2008), here summarized.
1. Defining the issue: the community and government agency should work together to identify who is included in the 'community', […] what is the process of change that is likely to take place, what will be the issues arising from this change process for the community, what values and attitudes does the community have towards this change and the change process, what levels of government are important in this context and which of the resources are likely to be affected by the change.
2. The internal community structure: identification of the key social groups who are likely to be impacted by the proposed change, the relationships within and between social groups, the informal systems of governance in place in the community […], the values, attitudes and beliefs held by different groups in the community about the resource and towards change.
3. Community history: the community can look at how it has responded to change in the past, and work together with government to ensure that the community is able to respond adaptively to the current change.
4. Community vulnerabilities: communities and governments can identify vulnerable components within a community, the resources and adaptive capacities which enable the community to overcome these vulnerabilities should be jointly considered (e.g. unemployment, high degree of reliance on one industry, […] geographical isolation, limited access to services, high levels of debt, […] low levels of connectedness between community members).
5. Community resources: a community's resources influence on adaptive capacity and resilience is assessed.
The assessment process aims at identifying community groups or leaders who play an important leadership role in change and incorporating them into the decision making process. Community social capital, social inclusion, skills and education levels and quality of life are investigated.
6. Adaptive capacities: the community and government can examine the community's ability to take action, that is, to mobilize its resources for adaptation. Flexibility and redundancy in the system which will enable the community to respond adaptively to a change also needs to be included.
The diversification of the local economy, the community ability to effectively organize itself and seek creative solutions to change, the timing of the community response to changes and the communication channels within the community must be analysed (Maguire and Cartwright, 2007).
It is essential that a social assessment process incorporating a resilience perspective is not a one-off task. It needs to be an ongoing process Community resilience is also the focus of the less recent Community Economic Development (CED) approach, illustrated in The Community Resilience Manual developed by the Centre for Community Enterprise (CCE, 2000).
Within this approach, resilience is defined as "the ability to take *intentional action* to *enhance* the personal and collective *capacity* of its citizens and institutions *to respond to, and influence* the course of social and economic *change*."
The accent is on the *intentionality*, meaning that a community can take actions to improve and increase its resilience. Coherent with its approach, the CCE study includes guidelines to increase the community resilience and to monitor its progresses.

In particular, according to the CED approach, resilience has four dimensions:

- people in the community
- organizations in the community
- resources in the community
- community process.

All four dimensions are linked, reflecting the interdependence between the different components of a community. The first three dimensions describe the nature and variety of resources available to a community. The fourth dimension, community process, describes the approaches and structures available to a community for organizing and using these resources in a productive way.

Each dimension breaks down into a series of more detailed "characteristics of resilience". These characteristics are the specific factors that are examined in a community to assess the level of resilience. They can be researched and analyzed to provide a portrait of a community's resilience.

The approach includes two types of indicators:

1) The first type relates to facts that we are able to collect about a community. Most of the information for these indicators can be found in government statistics, local statistics, and community reports (community studies and reports, city hall, regional district, other community organizations, ecc).

2) The second type of indicators concerns perceptions, attitudes and values. Information for these indicators is collected through interviews and focus groups.

Such perceptual indicators are not generally given great credit in mainstream economic research. In the context of CED (Community Economic Development), however, they are critical. Research has shown that such aspects as the level of optimism or pessimism, organizational co-operation, and quality and style of leadership in a community can have a very profound effect on its ability to change and adapt.

The Manual provides clear indications and supporting tools for statistical data collection, interviews and focus groups.

The CCE approach identifies some relevant characteristics of resilient communities, stating that successful communities:

- share characteristics related to the attitudes and behavior of local citizens.
- share characteristics related to awareness and use of both local and outside resources.
- work to develop a range of organizations and groups that address local needs collaboratively.
- involve all segments of their population in ongoing planning, implementation and evaluation.

(CCE Centre for Community Enterprise, 2000).

The dimensions of resilience

As previously stated, resilience is a multidimensional concept. Exploring the relations within its social, ecological and economic dimensions is necessary to better understand their possible integration in an aggregated resilience index, and the relation between resilience and social assessment.

Resilience and social capital

As emerging from the above-mentioned characteristics, a resilient community finds its roots and strength in its inhabitants. A recent paper suggests that social capital can be seen as the main aspect of social resilience. Social capital is 'the glue that holds society together', in the form of trust, reciprocity and exchanges, social networks and groups. Social capital is thus strongly interlinked with social resilience, and depending on its nature in a positive, or negative way. Hence, the study of the functioning of social capital, or the set of social networks and ingredients like trust, reciprocity, and public involvement, is crucial for our understanding of how communities deal with change (Beekman, van der Heide, Heijman, Schouten, 2009).

The relation between social capital and attitude to change is considered according to different perspectives including development and protection against risks.

Development is easier in communities with high levels of social capital. It is important to realize however that social capital can also obstacle development, if the social networks are so dense that change is not appreciated or even discouraged.

As for the risk "*a final mechanism is that social capital works as an informal safety net. The number and impact of risks are reduced because of greater risk-sharing and more trust*" (Narayan and Prichett 1999).

The influence of communities size on their relations is also explored: the smaller the rural community, the larger the chance that all members of the community can share the same networks, and thus share the same trust relations, and shared norms and values (Beekman, van der Heide, Heijman, Schouten, 2009).
The necessity of an active role of governments in promoting social capital is also considered,
As social capital stocks differ from community to community, can change over time, can be built up and broken down as a result of internal social change and external events (Putnam 2000; Field 2003), it is likely that existing social capital stocks at least can be influenced by policies (Callaghan & Colton 2008).
"Because of the complex nature of social capital, governments interest mainly focuses at measuring and monitoring social capital, rather than creating it. However, especially regional governments could play a role in stimulating the growth of existing stocks of social capital" (Beekman, van der Heide, Heijman, Schouten, 2009).
Within this framework the relation between social capital and social assessment is also examined; some authors consider that "*partnerships between governments and communities are the most effective means of implementing the social assessment process. (…) Governments and communities working together during a period of change can ensure that uncertainty, conflict and resistance are minimised, while maximising the chances of success of the reform process itself*" (Maguire and Cartwright, 2008).

Social-ecological dimensions integration
Several researchers underline the necessity of integrating "social" and "environmental" dimensions of processes. According to some authors, despite the vast literature on the social dimension of resource and environmental management, most studies focused on investigating processes within the social domain only; they treated the ecosystem largely as a ''black box'' and assumed that if the social system performs adaptively or is well organized institutionally it will also manage the environmental resource base in a sustainable fashion (Folke, 2006).
The limited scope of analyzing resilience only within the social dimension is explicitly considered: a human society may show great ability to cope with change and adapt if analyzed only through the social dimension lens. But such an adaptation may be at the expense of changes in the capacity of ecosystems to sustain the adaptation, and may generate traps and breakpoints in the resilience of a social–ecological system. Similarly, limiting the analysis to the ecological side only can negatively affect the decision making for sustainability support. That is why work on resilience requires to consider integrated social–ecological systems. These integrated systems' analysis are at an exploratory stage and there is still room for creative approaches and perspectives (Folke, 2006).

Adding the economic dimension to resilience
Social, economic and environmental systems are so intimately connected that socio -ecological – economic subsystems are only sustainable if their relationships enable the permanent co-evolution of each subsystem (Spangenberg 2005). Thus, the nature of the linkages between subsystems becomes important in determining the extent to which co-evolution can occur.
The linkages between subsystems also define 1) whether socio-economic systems can stay within ecological limits and 2) whole-system resilience, by determining how the shocks to one subsystem are transmitted to other subsystems (UNESCAP, 2008).

Resilience assessment: towards its different dimensions' integration
Confirming the indications provide by the literature analysis on resilience so far considered, the interaction between social, ecological and economic variables still needs a widely recognized aggregated indicator of resilience. A study of UNESCAP summarizes different approaches to assessing and/or measuring resilience in various analytical contexts, along with the results of the analysis. Some problems emerged due to the analysis application mainly to short time scales which do not allow for an effective dynamic approach. "*Most methodologies are applied to limited geographical and time scales and quantitative approaches have been largely based on valuation. While resilience is defined by the resilience community in specific terms, resilience measures are not always coherent with these definitions and rely on parameters that reflect resilience, rather than measure resilience directly*" (UNESCAP, 2008).

Furthermore the analysis are constrained by the complexity of socioeconomic and ecological systems, and the availability of data; this is particularly relevant since resilience is strongly related to analyzing the specific and often very different community characteristics.
Although certain studies construct indices that attempt to provide an indication of the relative subsystem resilience (either social, ecological, or economic), there is no index of resilience for unified social – ecological - economic systems. Developing a unified systems index would fill an important gap left by available indices insofar as it would consider shocks that are transmitted across and feedback into subsystems, which affects the resilience of each subsystem.
The construction of a *resilience index* from an integrated systems perspective may be considered.
One approach for creating a resilience index for linked social – ecological - economic systems would be to develop a conceptual basis for the selection and weighting of indicators that measure the resilience of each subsystem and to combine them in order to capture the adaptive capacity of the integrated system.
The UNESCAP paper leaves some open questions:
• *Have there been previous attempts to create such an index, or related indices?*
• *What would be the value-added of such an index?*
• *Is such an index feasible, plausible, policy relevant?*
(UNESCAP, 2008).
The above-mentioned CCE Manual represents another relevant effort towards the integration of different dimensions of a community's resilience.

Resilience concept application to rural areas and food systems
In rural areas, the strict connection between social, ecological and economic dimensions appears particularly evident, and their joint consideration in a resilience analysis seems an obvious consequence.
This interaction is described in the analysis of different case studies reported by Antonio Andreoni (Andreoni, 2008). The author shows that rural systems are more resilient in comparison with the urban areas, since they can better maintain their equilibrium with the ecosystem and bear the effects of external economic shocks.
Other authors state that '*the rural resilience concept is complex to theorize and to catch in an univocal set of indicators, and is far more difficult to measure*' (Beekman, van der Heide, Heijman, Schouten, 2009).
An interesting definition considers the relation between resilience and food systems "Resilience is *the ability of a food system to deliver a combination of economic, environmental and social goals. A food system needs to be resilient to sudden shocks and also more gradual changes, both coming from outside the system (exogenous) and generated by the unsustainable behaviour of the system itself (endogenous)*" (International Sustainability Unit, 2011).
The same authors focus on the relation between sustainability, resilience and secure food systems.
Four key risks that challenge the global food system today are listed:

1. exposure to energy and input prices
2. erosion of natural capital
3. extreme weather events and climate change
4. poverty, inequality and underdevelopment.

The authors further consider that *"these risks are inter-linked and often reinforcing, which means that they require an integrated response…. The world needs food systems that deliver a range of economic, environmental and social goals, while being resilient to risks and disruptions."*
This imply that a resilient food system should include both sustainability and food security issues.
The authors also stress the importance for resilience to operate at increasing complex spatial and institutional levels: *resilience must operate at multiple scales, from the farm or fishing boat, to the village, watershed, region, nation or global trading system - at each level complexity increases".* Within such a complex context, adaptive capacity will be key to overcome the challenges of the coming decades. *"Food systems that are diverse, modular and flexible are more likely to have the adaptive capacity that will be needed [...]. The focus of policy should* [then] *be broadened from growth and efficiency to risk, recovery and flexibility"* (ISU,2011).
Since food production systems are so varied and interconnected, a clear definition of its boundaries is also needed.

Different and specific agriculture and fishery production systems around the world have been examined in the ISU report, which specifically analyzes the economic impact of resilience on rural areas and related food systems. The analysis shows that "*although it is difficult to measure, the economic value of resilience can perhaps be best seen by looking at the costs of the current food crisis - higher food prices, increased subsidy bills, widespread malnutrition and political instability have cost society billions. This could be termed the cost of irresilience. The economic value of resilience is the ability of the global food system to maintain its functionality in the face of risks and shocks. This may have some upfront costs and may even mean accepting a lower level of economic output year-to-year*" (ISU, 2011).
The results also indicates that - under the pressure of the need for increased food production and the danger of food crisis consequent to natural and political risks - food systems should evolve in order to prevent the erosion of natural capital, the perpetuation of poverty and in general a greater vulnerability.
Resilience and sustainability of the food systems should then be increased. The study also shows that alternative production systems providing more sustainability and resilience are being implemented around the world, mainly at the smallholders' level. A strategy to spread the adoption of these experiences to a wider arena of farmers and fishers is needed (ISU, 2011).Academics and policy makers are more and more frequently approaching two specific focus while analyzing rural areas, addressing both developing countries and more developed nations: small farmers on one side and rural communities in metropolitan societies on the other.
This relation between small farmers in rural areas and the urban context is supported by different authors.
"*Small-scale farming is creating employment and contributing to rural development […]. It is better at preserving ecosystems [...] and when the income of small farmers increase, it creates a market for services and goods in the country which benefits other sectors of the economy in ways that increased incomes for large landowners do not*" (De Schutter, 2010).
Why rural areas and people matter in urbanized society, is further underlined by stating that "*even though rural areas may only contain 15-30 percent of a nation's population they typically contain most of its land, water, and mineral resources. …. In an era where food and energy supplies are increasingly insecure, and where environmental sustainability challenges social sustainability, rural environments take on added value and meaning. In highly urbanized societies, rural areas depend on their metropolitan counterparts for a multitude of social, economic and political goods and services but […] the reverse is also true when it comes to supplying the essential inputs that make urban industry and communities possible*" (Brown and Schafft, 2011).

3.4 Role of resilience in social assessment and its connections with sustainability

Several authors have discussed the usefulness of integrating the social resilience into the social assessment of a community. A synthesis of the contribution of the social resilience approach to the social assessment is provided by the study of Burdge and Vanclay (1995), confirmed by Schirmer and Casey in 2005, as reported by Maguire and Cartwright (Maguire and Cartwright, 2008).
The study stresses that a social resilience approach generates a richer and more useful social assessment in three ways:

- a resilience perspective is able to capture and contend with the complexity inherent in human-environment systems and social changes in those systems
- instead of attempting to control change, the resilience perspective recognises that change and uncertainty are inevitable, and that communities are dynamic
- the resilience perspective provides a way of assessing the resources and adaptive capacities of a community rather than just its vulnerabilities. In this way, it provides a core set of capabilities upon which to build adaptation strategies (Maguire and Cartwright, 2008).

Following the above mentioned suggestions, the authors state that a resilience approach to social assessment enables us to:

- understand the community's social characteristics
- understand the broader political and governance conditions and changes that are occurring, and their impact on the community's ability to manage change
- identify the different groups within a community, including those who are most likely to be affected by a change, and understand the relationships between those groups

- identify the vulnerabilities within a community which may reduce its resilience to adapt to change
- identify a community's resources and adaptive capacities which increase its resilience to change
- develop scenarios to understand how a change might impact on the community, and how that community might utilize its resources and adaptive capacities to respond in an adaptive way
- identify practical strategies to strengthen the community's resources and capacities
- monitor and evaluate changes as they occur to identify expected and unexpected social impacts
- explore a community's values, attitudes and beliefs, how these are influenced by the process of change, and how they may influence a community's response
- understand what impact external (social, political, governance) conditions have on a community's response to change (Maguire and Cartwright, 2008).

3.5 Resilience as a tool for policy makers

It is becoming more and more evident that policies and actions that help to develop resilient socio-economic systems should receive greater attention in national and international dialogue.
Following the paper prepared by the Environment and Development Division of the UNESCAP in 2008, a resilience analysis may provide the following:
1) assessment of whether socio-economic systems are becoming more, or less resilient;
2) comparison of resilience (focusing on adaptive capacity) across countries – as a way of providing a basis for each country (not only governments, but all the stakeholders) to take stock of their/its own situation(s);
3) predictions/forecasts of the potential impacts of future shocks;
4) predictions/forecasts of the potential impacts of future shocks with different 'resilience' investments – as a way of focusing attention of high-level policy and decision makers of the need for explicit investments in resilience and also to support policy and decision-making.

4 Discussion and Conclusions

The examined literature review highlights the recent changes in the meaning given to the term "resilience" and its analytical approaches. The importance of focusing on the specific characteristics of a community, when considering its attitude towards change, is becoming more and more evident.
Despite the difficulties in measuring and express resilience through a synthetic and unambiguous index, its role in improving a social assessment for the identification of sustainable policies and measures is recognized. It has been also recognized that a resilience perspective is able to capture and contend with the complexity inherent in human-environment systems and in the social changes affecting these systems.
Through a resilience approach it is in fact possible to understand the political and governance conditions and changes that are occurring around the community, and their impact on the community's ability to manage change. A further step made possible by this approach is the development of scenarios to understand how a change might impact on the community, and how that community might utilize its resources and adaptive capacities to respond in an adaptive way. This can help identifying strategies to strengthen the community's resources and capacities, instead of focusing only on vulnerabilities.
The dynamicity of the resilience approach allows ongoing monitoring and evaluation of changes as they occur and the identification of expected and unexpected social impacts.
The multidimensional character of resilience makes it easier to understand the impact of external conditions (social, political, governance) on a community's response to change.
The resilience approach should then be adopted not only in the analysis of community response to natural changes and disasters – as it was in the past – but also when considering the impact of other changes, such as political, social and economic, on the communities.
Furthermore the resilience approach adoption emerged as a tool for improving the social assessment of rural communities and food systems. In addition, the communities focus should consider not only rural areas in developing countries, but also highly urbanized contexts, both in developed and developing countries, given the ubiquitous role of the agricultural sector in world development, especially as a consequence of environmental changes and food crisis.
The resilience approach can also support the implementation of policies and strategies aimed at environmental and social sustainability, in turn strictly interconnected with economic sustainability. This

makes Resilience particularly useful for the legislator, when defining their sustainability policies, and for the administrative bodies (central and local governments) as a support to their sustainability strategies implementation (See fig. 1).

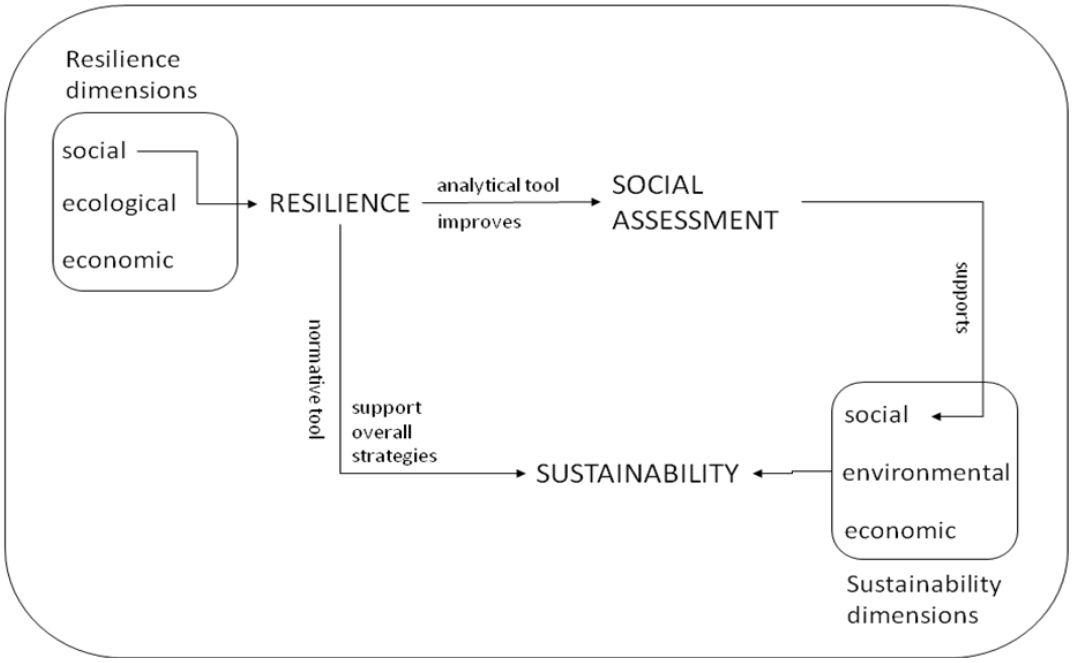

Figure 1. Role of resilience in social assessment and connections with sustainability

Further research should then address a clearer identification of resilience indicators and their aggregation index, synthesising social, ecological and economic resilience; an organic integration of resilience in the social assessment and in the normative approach to sustainability should also be considered.

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