# Community Resilience as an approach: operative tools for the social-ecological sub-system.

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**Abstract -** *Social resilience, as part of a broader notion of resilience, is becoming increasingly relevant both in theory and practice. It is increasingly perceived as a means to cope with contemporary shocks and driving forces of change, both internal and external to the system. Pandemics, earthquakes, and their side effects related to climate change are among them. Considering these pressures and related vulnerabilities, this paper discusses the community level of social resilience. It proposes qualitative resilient tools, both general and specific, for the benefit of the communities and their members, as for the people living and working in the town of Lezhë, Albania. The latter is considered a case study, in relation to which this paper provides some considerations and suggestions. The list aims to build the resilience of a community, involving, engaging, and empowering its members, considering resilience as an ongoing process. In this view, resilience is more pervasive as a discourse than merely a term, overcoming the risk reduction and management idea towards a more holistic approach.*

## Introduction

In literature, the term 'resilience' seems to maintain a continuous research interest over time. According to Google Trends, in fact, in the last five years (March 2017-2022), this term has confirmed a larger number of interactions worldwide than the term 'sustainability' in the 'Books & Literature' category (Fig. 1), with a peak in the period 29 March - 04 April 2020 coinciding with the outbreak of the COVID-19 pandemic.

Resilience is not only to be understood as a response ('coping') to interconnected variables, namely short- or medium-term phenomena such as earthquakes (Toto, 2020) and pandemics, or to so-called slow burns such as climate change (Davoudi, 2019). Resilience is rather intended to be a pervasive discourse, i.e., as a systemic approach useful in providing answers to complex spatial analyses that can be carried out at multiple scales.

In particular, this essay focuses on the contribution of social resilience to the umbrella concept of resilience. This expansion is conducted by considering three simultaneous aspects of human societies, namely persistence, adaptability, and transformability (Folke et al., 2010). Social resilience accepts potential as well as probable internal and external changes in the socio-ecological sub-system, its boundaries and the consequent co-evolution that binds the two terms over time.

Next, some general and specific qualitative tools are proposed in order to build community resilience (Berkes and Ross, 2012; Matarrita-Cascante et al., 2017) as part of the broader concept of social resilience (Wilson, 2015). They place communities at the centre of the discourse through community-based, community-centred, and community-led approaches (Poland et al., 2021), which are potentially applicable in different contexts, from heritage conservation (Fabbricatti et al., 2020) to Disaster Risk Reduction (DRR, hereinafter) (Patel et al., 2017) as for the case study of Lezhë, Albania.
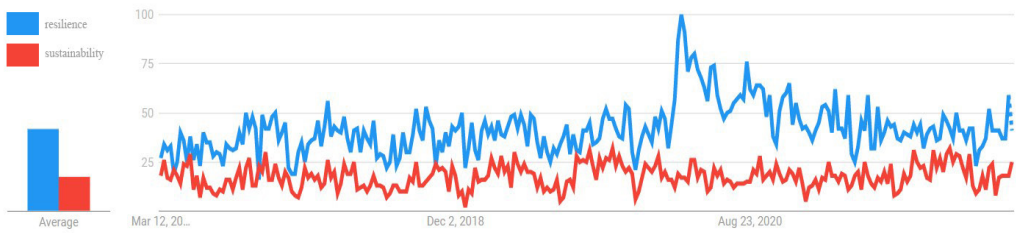
*Fig.1 / Google Trends of resilience vs sustainability in the field of 'Books & Literature,' worldwide, in the past five years (March 2017-2022). Source /Google Trends.*

## Potential tools for building a resilient community.

Examples of what the term 'resilience' means from the perspective of its theoretical and practical applications were made explicit by the curatorial project "Resilient Communities" led by Alessandro Melis at the Italian Pavilion of the 17th International Architecture Exhibition in Venice, Italy (May-November 2021). It demonstrated how communities are key actors underpinning any territorial process at different scales, playing central roles from the temporary use of spaces (Bragaglia and Caruso, 2020) to proactive and integrated landscape management (Aimar, 2019; Voghera and Aimar, 2022), for instance. From the literature and the findings of the curatorial project of the abovementioned Italian Pavilion, some general tools for building community resilience can be listed as follows:

-encouraging processes rather than projects that affect mere, discontinuous pieces of the city (Frampton, 1980: 343) (processuality);
-designing and planning for ever-changing life scenarios over time (adaptive processes);
-proposing multiple options and alternatives instead of imposing linear determinism and directionality in choices (redundancy and flexibility);
- moving from linear logic to associative thinking (associative thinking) (Melis, 2021);
- increasing procedural complexity instead of selecting specific administrative and management paths (managing complexity);

- working with communities to define which resilience concept is best suited to achieve their goals (designing consultations);
-defining the most appropriate stakeholders, both as individuals and as groups (framing the community consultations);
- taking into account multi-scalar actions, all to be carried out at the same time (trans-scalar design);
- including all the diversity of the social fabric (social inclusion);
-understanding the socio-spatial structure, the degrees of cohesion in the community, and increasing its interrelationships (social cohesion);
- developing time scenarios on the social practices to be implemented through the planning of short-, medium- and long-term overlapping interventions (stimulating social processes);
- designing in incremental steps to prevent the difficulty of understanding complexity from paralyzing and generating inaction among stakeholders (incremental processes) (Knauf, 2021).

They can be accompanied by specific tools, as listed below:
-detecting and understanding social vulnerabilities, to establish where and how to work to face them (be focused);
-looking for ways to improve the existing system, when and if possible (mitigation and adaptation);
-adopting mitigation and adaptation strategies, plans, and guidelines;
-stimulating commitment and cooperation of individuals and groups through shared visions, imagination, and creativity

*Fig.2/ Bottom-up consultations during the processes of defining a new Local Disaster Risk Reduction Plan for Lezha. Source: Municipality of Lezha, and Co-PLAN - Institute for Habitat Development.*

(Repetto and Aimar, 2021), to establish adaptation and transition in the long run;
- using technology for more careful and responsive monitoring and/or on-demand interventions, promoting sustainability (real-time feedback);
- planning for more win-win solutions for all the actors in urban contexts, such as nature-based solutions for a climate-proof design of the city (McHarg, 1971; Coaffee, 2019) (engineering approach to resilience);
- planning for buffer spaces both in the city fabric and its public buildings, allowing multiple, customizable uses (Koolhaas, 1995);
- encouraging the government system to foster and support bottom-up practices in decision-making (bottom-up approach);
- responding to local's needs (people-centered approach);
- ensuring capacity building and knowledge transfer in the communities (developing skills).

**The case study of Lezhë, Albania, and the contribution of social resilience as an approach.**
The town of Lezhë (41° 47' 9.8628" N, 19° 38' 45.8736" E), in north-western Albania, has some specific vulnerabilities, such as high exposure to high-magnitude earthquakes. Following the 2019 seismic event, the national and international allocation of funds for the reconstruction of the affected areas included the implementation of 'soft measures' (Toto, 2020: 18) such as 'empowering preparedness, ... training and planning' (ibid.). Toto also reports that these are,

however, 'fully dependent on government support (2020: 18), suggesting that Lezhë has little inherent capacity to respond to external disruptions as a system of systems, as denoted in the Diagnostic Report of the "Ready2Respond" program related to "Emergency Preparedness and Response Assessment" in Albania (The World Bank, GFDRR, 2021: 6).
This could also prove worrying in the mid-to-long term, also considering ongoing global climate change. As pointed out by Bastin et al. (2019), Albania is also affected, reaching a maximum temperature of the hottest month in Tirana that is about 3.5°C higher than the current one, with an average annual temperature increase of 1.9°C by 2050. This change suggests that mere mitigation of the side effects of climate change will no longer be sufficient, as defending the status quo will no further be possible as the only project option.
The above recommends that the social dimension of resilience needs to be strengthened, not only as a functional response to the demands of a disaster recovery plan, but also in building the adaptive capacity of systems in a shared, mature, and lasting way. From this perspective, it would be good to move from the idea of resilience as combined risk management to systemic resilience, where capacity building is a pillar on which social resilience hinges.
The latter seems to be the area where more work needs to be done, not least in light of the recent COVID-19 pandemic, during which the community response was ambivalent. On the one hand, the social network was crucial in absorbing

*Fig.2/ Bottom-up consultations during the processes of defining a new Local Disaster Risk Reduction Plan for Lezha. Source: Municipality of Lezha, and Co-PLAN - Institute for Habitat Development).*

the shock caused by the outbreak of the pandemic and its initial phases, including the imposition of a national lockdown (March 2020). On the other hand, it proved to be less than robust in its ability to reorganize and innovate in the face of this systemic shock (Adger et al., 2005). Possible causes include a low national and local understanding and managing risk, as manifested in the recent pandemic (2020-ongoing).

Therefore, it is necessary to go beyond the action-reaction culture as a linear response to a systemic shock to promote an open critique of the system itself, thus being able to open up to broader assessments aimed at strengthening its constitutive bases. What has been stated in the previous paragraph could find acceptance in a district-based risk management plan, thus in a more specific and climate-related way than the General Local Territorial Plan in the Municipality of Lezhë (2016).

This could be synergistic with the initiative, already in place, to draft a Local Disaster Risk Reduction Plan for this area, with the support of the United Nations Development Programme Albania and Co-Plan - Institute for Habitat Development (Toto, 2020; UNDP, Co-PLAN, & Municipality of Lezhë, 2020a). This is achieved through active consultation with the local people, carried out by Co-PLAN operators through field surveys, as shown in Fig. 2. This mentioned plan is the local-level pilot of UNDP's "RESEAL Project", entitled "Resilience Strengthening in Albania" (UNDP, 2020b), which seeks, however, to "... support the development of local (municipal) DRR framework and local response capacities in harmonization with the national DRR system and legal framework in place." (ibid.: 4). The process was a citizen-led initiative to 2 reasons; firstly, for the leak of hazard-related data, especially for flood prevention and secondly, to inform the residents about their role in the anthropocentric interventions that emphasize risks and the exposure to them.

**Conclusions-** Discussing social resilience today from an urban planning perspective seems to require a paradigm shift in urban planning instruments. It is necessary to take into account a multiplicity of factors that include a renewed interest in humanism and the natural world as part of the socio-ecological system.

Community participation is a fundamental part of an effective resilience-oriented design, based on the current and future experiences of the members. Redundancy of data and practices, network connectivity (quadruple helix and multi-layered) and adaptability are among the keywords to be embraced in order to write a monitorable and implementable program that seeks to build community resilience through community input.

To make this happen, there is a need to stimulate critical interpretive thinking to understand the changing needs of society and how it evolves, embracing the co-evolutionary theory of socio-ecological systems. In times such as these, ruled by volatility and uncertainty at the macro level, resilience also appears to be a comprehensive approach to the

more precise allocation of resources at the micro-level, in the face of the threat of reduced investment due to global risk factors, including climate change, pandemics and conflict.

In the specific case study of Lezhë, the conventional top-down coordination system should increasingly provide for a bottom-up contribution in managing and responding to the interconnected risks mentioned above. This will be possible through capacity building of the community members, considering both the initial limitations of this pathway and the subsequent ones that are inherent to the sociocultural subsystem.

Among the limitations, continuous monitoring has to accommodate possible contradictions in public and private needs and resources and overlaps resulting from the application of the new models suggested by the resilience and current conditions in the territories. This can cause difficulties in applying radical and transformative models (so-called 'bounce forward') as they can also reverse socio-cultural structures as well as economic and political patterns embedded in local populations (Diamond, 2005).

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