UNIWERSYTET Andrzeja Frycza Modrzewskiego w Krakowie

BEZPIECZEŃSTWO TEORIA I PRAKTYKA SECURITY THEORY AND PRACTICE

e-ISSN 2451-0718
ISSN 1899-6264

2026
Nr 2

Copyright© 2026 by the Author(s)
This is an open access article under the CC BY-NC-ND 4.0 license

https://doi.org/10.31749/2451-0718-btip-2026-2-001
Received: 4.06.2026
Accepted: 14.09.2026

Analytical Frameworks of Local Community Resilience to Crisis Threats: Their Significance and Principles of Development

Janusz Ziarko

PhD, DSc, Associate Professor, Faculty of Security Sciences, Andrzej Frycz Modrzewski Krakow University, Kraków, Poland
https://orcid.org/0000-0002-9100-2807

Introduction

A reactive approach to managing local community resilience does not guarantee effective governance and is therefore insufficient. Proactive models should prevail, in which resilience is not perceived as a static aggregate of resources but rather as a dynamic, emergent property of a social, technical and natural system, resulting from the interactions among its appropriately configured components (Norris et al., 2008). This is associated, on the one hand, with the widespread everyday use of complex technologies, whose unintended side effects generate technology-related hazards, as well as risks arising from their deliberate destructive use. On the other hand, resilience management is implemented within the context of a risk society and a VUCA environment (Sinha & Sinha, 2020: 18–20), characterized by volatility (V), uncertainty (U), complexity (C) and ambiguity (A).

In addition to traditional threats, residents increasingly experience new forms of hazards that are often imperceptible to the senses and intangible in nature. These hazards intensify the dissatisfaction of security needs, causing individuals to feel

more disoriented and desperate (Beck, 2002). This study presents a concept for building a network of interconnections linking social, cognitive and structural factors that determine resilience. The concept assumes a two-stage process: the deconstruction of cognitive barriers that hinder risk assessment and the integration of five key forms of capital, combined with the use of a nodal communication structure in networking processes.

It is assumed that achieving the objectives associated with resilience-oriented preparedness of local environments and their residents for coping with various crisis threats requires resilience to be perceived and treated as the cumulative effect of two distinct classes of factors and the relationships between them. These include: (1) material and symbolic factors characterizing local communities and their members, and (2) factors related to the activities of society and its institutions in the field of security.

Given the depth and complexity of social environments, conceptual approaches to resilience building cannot be characterized by rigid structures. The flexibility of resilience conceptualization should stem from a process-oriented approach to resilience development that takes into account the specific characteristics of different communities on each occasion. A consensus among multiple perspectives on resilience, associated with cognitive, emotional and volitional acts embedded in the realities of everyday life, that is, under the conditions of the so-called "Third Wave" (Toffler, 2001), makes it possible to identify socially accepted approaches to resilience building.

It is assumed that the analytical framework of resilience applied in research and/or practice determines the number, type, and characteristics of key factors to be analyzed and utilized, while distinguishing and organizing them both hierarchically and relationally. Understood in this way, it serves as a lens that helps researchers and practitioners recognize and structure problems, assign meaning to them, identify directions for further inquiry, and improve practical interventions. It also provides confidence that the selected elements and all anticipated relationships among them will be appropriate and useful in the context of a given research problem or practical solution (Lester, 2005: 460).

The usefulness of such frameworks derives from three principal functions: (1) presenting the concept of community resilience in the context of the capacity to cope with crisis situations, (2) identifying the potential role of resilience as a factor enabling community adaptation and transformation, and (3) evaluating the usefulness of a given approach to building community resilience capacity. Such frameworks should be subjected to systematic research aimed at expanding knowledge about them.

Methodological Assumptions

Research objective: to highlight, in the form of an analytical framework, the various factors and interrelationships characterizing local communities that influence their resilience to crisis threats.

Research questions:

1. What principles should guide the development of an analytical framework of local community resilience to crisis threats so that it constitutes a useful tool for both analysis and practice?
2. What significance does an analytical framework of local community resilience to crisis threats have for building resilience as a community's capacity to cope with crisis situations and the changes and challenges associated with them?

Working hypotheses:

1. It is assumed that a holistic approach to developing local community resilience frameworks, drawing on the concepts of emergence, social constructivism, negotiation and social identity, will facilitate the identification, explanation and description of relationships among the principal factors of community resilience, while contributing to a better understanding of social practices associated with resilience building.
2. It is assumed that analytical frameworks, by integrating various dimensions of community resilience, illustratively strengthen the relationship between the concept of resilience and its practical application, emphasizing its proactive and dynamic characteristics that support the development of resilient local communities.

Research Method

This study employed a narrative literature review to organize, critically analyze, and synthesize various conceptual frameworks of social resilience to crisis hazards. This form of review was chosen due to the multidimensional, interdisciplinary and ambiguous nature of the concept under study. A narrative literature review enables a qualitative interpretation and synthesis of academic literature, identifying the main conceptualizations of the phenomenon, their similarities and differences, as well as areas requiring further research. Unlike systematic reviews, its goal is not the statistical generalization of results, but rather an in-depth interpretation and integration of knowledge from diverse sources (Paré & Kitsiou, 2016).

A limitation of the narrative review is the lower level of standardization in the search, selection and synthesis procedures, which may increase the risk of subjective publication selection (Green et al., 2006). At the same time, applying clear rules for

identifying, selecting and evaluating sources helps mitigate this risk and increases the transparency of the research process. A key advantage of this method is its flexibility in integrating findings from different scientific traditions and theoretical perspectives – a quality particularly important for analyzing social resilience as a multidimensional and relational phenomenon (Cronin et al., 2008). Within the narrative review, a snowballing approach was used, i.e. a strategy for identifying further publications by analyzing bibliographic connections between works. Both backward snowballing (analyzing reference lists of previously identified publications) and forward snowballing (identifying later publications citing the works under review) were employed (Wohlin, 2014). This strategy was recognized as a useful method for retrieving literature that might otherwise be missed by keyword-based searches alone, which is especially relevant for social resilience given its conceptualizations are scattered across various disciplines and research traditions (Grant & Booth, 2009).

The literature search was conducted using the Web of Science, Google Scholar and PubMed databases, covering works published up to July 1, 2026. The selection of databases reflects the interdisciplinary nature of the research problem and includes literature from the social sciences, management, disaster and hazard studies, public health, and community resilience. The query process applied keywords related to three main thematic areas:

1. **Dimensions and parameters of local community resilience to crisis hazards**, including absorption (preparedness, flexibility), adaptability (adaptive capacity), cooperation (mobilization, self-organization), readiness (preparedness, prevention) and continuity (sustainability and capacity to maintain the functioning of local systems) (Cutter et al., 2008; Norris et al., 2008).
2. **Social practices of residents building resilience**, including self-organization (monitoring and diagnosing needs), prevention (maintaining readiness and civic education), preparedness (shaping attitudes, skills, and mutual trust), education (knowledge exchange and raising awareness of hazards) and developing competencies necessary to perform social and economic roles (Aldrich & Meyer, 2015; Magis, 2010).
3. **Consequences and impacts of crisis situations on communities**, including recovery (regeneration and reconstruction), risk reduction (minimizing the impact of hazards), vulnerability (susceptibility to hazards), trauma (shock and destabilization) and survival (maintaining the continuity of community functioning) (Tierney, 2014; Bonanno et al., 2007).

Selected review papers on social resilience served as the starting point for literature identification, acting as seed studies to initiate the snowballing process (Wohlin, 2014). Their bibliographies were subsequently analyzed alongside publications that cited them. Newly identified items were evaluated for relevance to the review's aim, research focus, and the scope of variables and conceptual categories analyzed.

Publications meeting the inclusion criteria were selected for further analysis: originating from peer-reviewed academic journals, directly addressing the problem under study, available in full text, and published in Polish or English. The analysis of keywords, abstracts, full texts, and bibliographic connections – supported by researcher judgement – enabled the selection of literature relevant to the study's aim. Setting explicit guidelines for seed selection, inclusion criteria and snowballing execution increases the transparency of the selection process and reduces the risk of arbitrary source selection (Snyder, 2019). This designed procedure is well suited to the narrative literature review approach and facilitates an in-depth, multifaceted synthesis of knowledge on social resilience to crisis hazards.

Theoretical Foundations for Constructing Community Resilience Frameworks to Crisis Threats

The subject of this study is the analysis of the current state and the potential for building the resilience capacities of a specific community, characterized by varying levels of social, industrial and urban development. It therefore becomes necessary to establish an appropriate analytical and theoretical framework for describing, interpreting and explaining both the current condition and the developmental potential of resilience within the community under examination (Snow & Benford, 1992: 140–145). The principal issues arising in this context concern the characteristics of the community, considered in relation to crisis threats and to the resources available that condition its resilience capacities. Community resilience and its development should be understood as systems of purposeful processes which, when properly structured by their participants, contribute to the enhancement of various dimensions of resilience (Chandra et al., 2011: 9). Communities and individuals, by organizing processes that utilize local resources, experience and specialized knowledge, act with the intention of preparing themselves to cope effectively with crisis situations and to provide mutual assistance in ways that complement the response of emergency services (*Strategic National*..., 2011: 4).

The concept of a process serves to describe a sequence of interconnected and causally conditioned events, activities and tasks whose proper organization is intended to ensure the achievement of a given objective. Processes are inherently interrelated, overlapping and mutually influential, while the community participating in them must preserve its fundamental identity. The directional nature of processes refers to changes proceeding along a specific trajectory, leading to new states of the community that move it closer to a distinguished and preferred condition. The orientation of community resilience-building processes is intended to ensure that each successive process improves the community's resilience preparedness and brings it closer to a desired state (Sztompka, 2012: 497). Consequently, organizational activities and the

actors responsible for them should be assigned a key role in structuring and implementing these processes. This raises numerous questions: What characteristics should such processes possess? What factors determine them? What is, or should be, the role of different social groups in their implementation?

Firstly, by perceiving the development of community resilience as the outcome of ordered processes, it is assumed that (Sztompka, 1980: 317–318):

1. Building resilience requires a variety of logically organized activities connected through both temporal sequences and cause-and-effect relationships.
2. The structures of community resilience processes, intentionally designed, constitute coherent wholes characterized by specific properties that generate particular patterns of participant behaviour, thereby enabling the achievement of intended goals.
3. The implementation of purposeful and interconnected processes brings members of local communities closer to levels of resilience that correspond more closely to desired conditions.
4. The internal organization and dynamics of community resilience processes, conditioned by social, environmental and technical requirements, must adapt to these requirements.

It can be observed that resilience-building necessitates purposeful changes occurring within the community itself. When designing such changes, it should be assumed and acknowledged that (Sztompka, 2012: 496):

a) specific interactions exist between the subjective and objective components of the local community, through which new properties and capacities for action may emerge;
b) the acquisition of new resilience capacities may proceed along different pathways that take local conditions into account;
c) a new configuration of capacities differs from previous ones primarily through the emergence of more effective networks of relationships among community elements, including interactions, interests, norms and ideas.

New interactional structures emerge because individuals, motivated by concerns for security, establish new contacts, enter into new relationships, and form new groups. New structures of interests arise because the need to ensure security encourages people to unite around shared concerns. New normative structures develop because security acquires renewed significance as a value, leading individuals to adopt new norms and adapt to new social roles. New ideational structures emerge because people acquire new knowledge about the world, increasingly recognize the importance of both individual and collective resilience to crisis threats, and begin to perceive themselves as resilient actors.

Secondly, when analyzing the position and role of participants in resilience-building processes, two important functional dimensions should be considered (Sztompka, 1980: 318–321).

Agency and the Capacity to Influence Processes

The first dimension concerns whether participants possess agency that enables them to influence the organization and course of resilience-building processes. This functional aspect involves two complementary perspectives:

1. resilience development has an objective character, realized through the actions of individuals pursuing their needs;
2. people's approach to their own security has a subjective character, although it is objectively conditioned.

The outcomes of community resilience development constitute a measure of the preparedness achieved for coping with crisis situations, which in turn affects individuals' sense of security. Consequently, perceptions of agency may take two forms:

Fatalistic orientation – the belief that one's actions lack causal efficacy and have no influence on progress in resilience preparedness.

Voluntaristic orientation – the belief that one's actions play a decisive role in the preparation and implementation of resilience-building processes in response to crisis threats.

Causal Determination

The second dimension concerns causal determination. It refers to the factors influencing human actions, the goals of those actions, and the manner in which they are organized and implemented. Such determination, shaped by historical experience as well as contemporary social, technical and environmental conditions, may lead individuals to believe either that:

a) the outcomes of resilience preparedness depend on preceding and/or current causal factors rather than on themselves; or
b) these outcomes are shaped by their own actions, regardless of the various conditioning factors involved.

A particularly significant combination of agency and causality in community resilience-building is the conjunction of voluntaristic and deterministic factors. According to Sztompka, this conjunction best captures the essence of the position referred to as *activism*, according to which human beings play a central role in both the processes and outcomes of resilience preparedness through the gradual improvement of this important dimension of social life. Individuals are therefore assigned responsibility for the course of these processes.

Such responsibility is closely connected to the choice of an approach to resilience-building. On the one hand, it involves decisions regarding how available opportunities and resources are to be utilized and what can be employed in developmental activities. On the other hand, it concerns the perception of difficulties and threats that condition action, as well as the ways in which these barriers are understood and overcome. This implies the continuous identification and development of community

characteristics and capacities that justify describing communities as active, progressive, capable and willing to undertake collective efforts aimed at strengthening their resilience. Equally important is the identification of individual characteristics and capabilities that render actions undertaken in the interest of security progressive and conducive to creative transformation.

A real community can be situated between the poles of two ideal types: the *active community* and the *passive community*. An active community is characterized by optimism and hope, a sense of efficacy and the conviction that the future depends on human action. Its members think in strategic and long-term terms, anticipating and planning development over an extended time horizon. A passive community represents the opposite of this ideal type.

The activity and progressiveness of a community are not determined by the level of achievements already attained, but rather by the latent capacities and aspirations towards activity and accomplishment embedded within the community. The closer a community approaches the activist pole, the more progressive it becomes (Sztompka, 2012: 508). Community activity is conditioned by the mobility, vitality, creativity and dynamism of individual members. This raises the question of what kinds of individuals a community should possess in order to inspire and mobilize others towards forms of social behaviour conducive to collective self-transformation.

Two categories of such actors may be distinguished. The first includes organizers, reformers, revolutionaries, politicians and social activists. The second comprises ideologues, moral leaders, codifiers, intellectuals and educators, i.e. those who act for others, on behalf of others, and in the interest of others. These are the members of the community who shape minds, influence attitudes and direct the aspirations of other community members (Sztompka, 2012: 508–509).

The activist conception, associated with communities open to change and progress, functions as an idea that mobilizes action, legitimizes the necessity of action, and indicates directions for action for both public leaders and ordinary citizens. It is therefore an idea that contains an inherent mechanism of self-fulfillment. It contributes to the emergence and consolidation of an active society – the only type of society before which genuine opportunities for development become available (Sztompka, 2012: 507).

Analytical Frameworks for Understanding the Determinants of Resilience Building

Social resilience, which requires both individual and collective actions undertaken by people in order to develop the capacity to cope with crisis-related threats, essentially constitutes a dynamic social structure in a continuous process of becoming. It should be emphasized that within a developing community, the "old" invariably coexists with

the "new"; these elements intermingle, transform one another and assume diverse, often unexpected forms (Sztompka, 2005). The observation of social actions and processes, together with the analysis of the various phenomena accompanying them, constitutes the starting point for examining the resilience of local communities. A cognitive focus on actions, processes and their determinants is intended to facilitate the description, interpretation and explanation of the community mechanisms that either drive or inhibit the development of local community resilience. Within society – as a living, multifaceted, and evolving ecosystem – it is difficult to identify the fundamental mechanisms shaping resilience and the conditions that enable a community to achieve and maintain a desired state of resilience. Equally challenging is the avoidance of a priori assumptions and solutions.

A framework is a cognitive tool that enables the organization of the complexity and dynamism of the surrounding world – social, natural, and technological – which is inherently characterized by contradictory signals, narratives and stimuli. By simplifying the selection and interpretation of surrounding objects and phenomena through the selective identification of objects, situations, events, experiences and sequences of actions derived from present or past environments, a framework serves to assign meaning to a problem and clarify what is at stake (Snow & Benford, 1992: 133–155). Collective action frames direct the researcher's attention to ideas, processes, and events, that is, to those factors that are significant for building local community resilience in a given context. The principal challenge lies in identifying and evaluating the latent patterns that emerge from problem analysis and in recognizing them in the most optimized, reliable and accurate manner possible (Naeem et al., 2023). In other words, frames function as mechanisms of articulation that connect diverse environmental and situational elements in order to convey a particular set of meanings and, consequently, a particular version of reality (Satheesh & Benford, 2020).

It is therefore important to understand how the concept of framing and the elements of resilience embedded within a framework may be applied to the conceptualization of various forms of resilience and, most importantly, to illustrate the scope and content of activities aimed at building community resilience according to the highest standards. From this perspective, a conceptual framework may be regarded as an effective instrument for translating the most significant challenges associated with resilience building into a language comprehensible to local actors engaged in resilience-building efforts. Framing analyses foster resilience-oriented thinking that extends beyond simple disaster response. Such thinking should encompass the everyday dynamics of communities and proactively support the strengthening of resilience. It should focus on the multiple determinants of local community resilience, which are shaped within specific social arrangements and through the operation of social mechanisms.

It should also be emphasized that a conceptual framework enables the accessible presentation of what resilience research has achieved to date. The structure of a framework facilitates the translation of diverse scientific achievements into language understandable to audiences regardless of their familiarity with resilience theories. This becomes particularly important when resilience-building processes involve a wide range of stakeholders. The objective is to jointly seek effective courses of action by drawing upon scientific achievements through dialogue that is both interdisciplinary and intercultural (Pawłowski, 2007: 117–118).

The search for pathways to local community resilience requires comprehensive empirical analyses capable of revealing both the processes of resilience building and their specific determinants, the mechanisms governing these processes, and the regularities according to which they unfold. The concept of a framework assists in presenting, in the form of models or structures, the various pathways through which communities may strengthen their resilience. In the context of resilience building, two fundamental frameworks may be proposed. The first is the Community Resilience Capacities Framework, while the second is the Community Resilience Activities Framework. Together, these frameworks constitute an integrated whole connected through both stable and dynamic relationships. They provide conceptual and theoretical scaffolding, articulate assumptions, beliefs, and expectations, and facilitate analyses of a broad range of factors and conditions associated with individual and collective resilience capacities and actions. Furthermore, they enable the graphical or narrative representation of key issues related to local community resilience, including critical factors, concepts, variables and the implicit relationships among them (Miles & Huberman, 1994: 18).

The universality and internal logic of the conceptual categories used to represent resilience elements within a framework, together with the synthetic and analytical nature of frameworks themselves, create a dialogical space among social actors who may understand and evaluate resilience and resilience building in different ways.

Community Resilience Capacities Framework

The proposed Community Resilience Capacities Framework may encompass four dimensions (Norris et al., 2008: 130–142):

1. Individual and Social Dimension

This dimension integrates trust-based relationships within families and immediate neighbourhoods (bonding social capital) and between different social groups and institutions within the community (bridging social capital), while taking into account vulnerable groups such as older adults, individuals living alone, and persons with disabilities. It contributes to the development of a sense of belonging and

strong social ties (Aldrich & Meyer, 2015: 254–263). It constitutes the foundation of community resilience.

When active, creative, innovative, achievement-oriented individuals characterized by substantial knowledge, imagination and realism operate within structures that encourage participation and provide opportunities for creative engagement, this contributes to higher levels of human capital and strengthens the agency of community actors in terms of coping, adaptation and transformation capacities. Such structures – pluralistic, heterogeneous, open, flexible and tolerant of diversity and originality – generate social bonds and mechanisms that support the development of community resilience (Sztompka, 2012: 496–499).

2. Economic Dimension

This dimension is based on a stable local economy and its relationship with the community, as well as on the current and anticipated economic situation of community members. Its significance is reflected not merely in the level of income but, above all, in income diversification and the equitable distribution of resources that protect life and health within the community (Nguyen & Akerkar, 2020: 134–144).

3. Institutional and Organizational Dimension

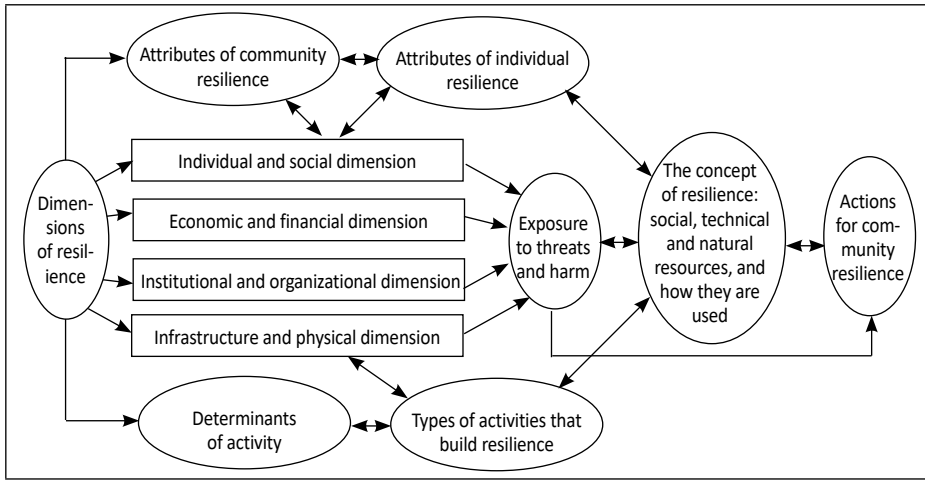
This dimension concerns the relationship between public administration and citizens, which determines the scope for grassroots initiatives (Norris et al., 2008). Decentralization and procedural flexibility are particularly important, as they stimulate bottom-up engagement and enthusiasm. Resilience increases where local authorities are willing to "step back" and place trust in self-organizing citizens while supporting them with appropriate resources.

An important component of community resilience to crisis threats is access to stable and reliable communication channels. Effective communication strengthens social trust, facilitates cooperation among diverse actors, and supports education and public awareness regarding safety and security. Network infrastructure enhances a community's capacity for self-organization, resource exchange, mutual assistance and collaborative problem-solving. It serves not only as a tool for crisis management, but also as a strategic resource supporting the long-term development of safety and social resilience.

4. Resilience Governance Dimension

The ability of local authorities to involve citizens in decision-making and planning processes increases public participation and influence in resilience-building efforts. Such participation constitutes a foundation for the absorptive, adaptive and transformative capacities of social actors (Saja et al., 2018: 865–868).

Figure 1. Concept of developing resilience analytical frameworks



Source: author's own work based on Andersson et al., 2021.

Community resilience activities framework

Within the proposed Community Resilience Activities Framework, categories of activities such as the following may be distinguished (Chandra et al., 2011: 15, 19, 33, 39, 45, 49):

- promoting resilience and enhancing community well-being;
- ensuring access for all those in need to high-quality safety and security services, including the development of plans for effectively responding to community members' safety-related needs;
- educating the community and providing ongoing public information regarding preparedness, threats and available resources before, during and after disasters;
- developing social networks and engaging community members, including the promotion of participatory decision-making in planning, response and recovery processes;
- fostering self-reliance by enabling and supporting individuals and communities to assume responsibility for their own preparedness;
- strengthening the effectiveness of community partnerships through the development of robust collaborative relationships between public administration and other organizations;
- improving the preparedness of individuals and organizations through the collection, analysis and utilization of data for monitoring and evaluating progress in community resilience building;
- enhancing the efficiency with which existing community resources are utilized in order to maximize their contribution to resilience development (Pfefferbaum et al., 2013).

Framing and Analytical Frameworks of Resilience to Crisis Threats

Framing is an active process of seeking an acceptable interpretation of reality among diverse members of a local community. Leaders engaged in building community resilience participate in framing specific aspects of reality in order to create shared frameworks for collective action. Such frameworks direct attention to events, aspects and ideas that are relevant to resilience-building objectives. They function as articulation mechanisms that connect diverse environmental elements and convey to community members a particular set of meanings, presenting a desired version of reality that can mobilize residents and justify calls for strengthening local resilience (Satheesh & Benford, 2020). In the context of resilience-building, framing therefore involves attributing meaning to objects, events and situations that are significant to the local community and that collectively construct a particular image of the environment, problematize the existing status quo, and thereby stimulate the search for ways to transform it. Framing is thus associated with the construction of meanings relevant to resilience-related challenges, meanings that are promoted by advocates of development yet reach opponents and indifferent individuals alike (Snow, 2022).

The concept of developing analytical frameworks of resilience that illustrate the principal activities and tasks constituting the resilience process, while identifying the fundamental social capacities that condition the organization and implementation of these activities, is closely linked to the manner in which community resilience is understood. Community resilience to crisis threats is conceptualized as[1]:

1) a continuously evolving set of capacities and competencies that enables a community to perform, in an agile, effective and safe manner, tasks related to:
   a) preparing its protecsive and defensive mechanisms for emerging crisis threats and coping with hazards through absorption and response;

[1] Local community resilience is an ambiguously defined concept. For instance, A.H. Kwok et al. classify the fac-tors determining social resilience into four categories: (a) capabilities, knowledge and skills; (b) community char-acteristics and social amenities; (c) community values and perceptions; and (d) social processes (Kwok et al., 2016). A.A. Saja et al. classify these factors according to five main dimensions: (a) social structure; (b) social capital; (c) social mechanisms; (d) social equity and diversity; and (e) beliefs/culture/religion (Saja et al., 2018). S.L. Cutter et al. emphasize that there is a growing consensus in the academic literature that resilience is a multi-dimensional concept encompassing social, economic, institutional, infrastructural and ecological components, as well as social capital (Cutter et al., 2010). S. Khalili et al. propose a set of ten interrelated indicators reflecting the social capacity to anticipate and adapt to hazards such as natural disasters, economic crises and socio-political or military disruptions. These indicators include: (a) social participation; (b) education; (c) information exchange; (d) social support; (e) sense of community; (f) trust; (g) improvisation, creativity and innovation; (h) coping style; (i) leadership and coordination; and (j) community effectiveness (Khalili et al., 2015).

b) adapting to the challenges posed by an ongoing crisis threat and mitigating the stress it generates in ways that restore the community's sense of security to a level comparable to that existing prior to the incident; and
c) transformatively utilizing newly acquired knowledge to strengthen the community's capacity to withstand future crisis threats;

2) a set of activities that should be undertaken by a community seeking to build resilience to crisis threats – resilience that would provide both individual members and the community as a whole with the agency necessary to undertake appropriately organized protective and defensive actions. More homogeneous and detailed subsets of professional activities and tasks, defined within this broader set of activities, should ensure community preparedness for effective and safe responses to crisis threats and enhance its capacity to mitigate the adverse consequences of future crises.

Developing an analytical framework for community resilience to crisis threats, based on the above definition, requires the selection and integration of multiple dimensions of resilience, together with the processes and activities associated with them. A more comprehensive social understanding of community resilience as a form of social dynamics requires the construction of an agreed analytical framework based on different dimensions of resilience that are mutually interdependent and whose constituent categories may overlap (Figure 1) (Cutter et al., 2010).

The concept of resilience analytical frameworks (Andersson et al., 2021), illustrated in Figure 1, highlights three distinct spheres of factors and associated intentions that may support active community members in initiating inclusive actions, ranging from decision-making and planning initiatives to implementation activities tailored to the specific characteristics of the community and the nature of the threat.

The first sphere encompasses the socio-ecological dimensions of resilience, representing various characteristics of the community and its local environment that collectively portray the local system, including the condition of its population, economy, institutions and natural environment. The second sphere defines the various relationships among the environmental elements articulated within the first sphere, viewed in the context of intentions directed towards building specific components of community resilience. It constitutes a conceptual representation of the combination of different possibilities and their potential effects. The third sphere represents the governance of local socio-ecological factors, embedded within the processes and instruments of resilience-oriented governance.

This understanding of community resilience conceptualizes it not as a fixed state but as a dynamic process. The analytical framework is intended to facilitate an understanding of resilience as a form of social dynamics that engages and connects diverse groups of factors. The adopted dimensions assist researchers and practitioners in identifying, structuring and interpreting social elements, while also enabling the

identification of pathways for resilience-building action. They are likewise useful for assessing whether selected elements and the relationships among them are appropriate and effective in the context of developing a particular component of resilience (Lester, 2005: 460).

For example, Aldrich (2012) emphasizes the critical role of social capital in a community's capacity to survive disasters and rebuild both infrastructure and the social ties that constitute the foundation of every community. He argues that communities characterized by high levels of social capital – manifested through strong interpersonal trust and active civic engagement – are better able to mobilize residents to participate in and contribute to post-disaster recovery efforts, overcome collective-action problems that hinder cooperation after disasters, and share resources in situations where formal assistance is lacking.

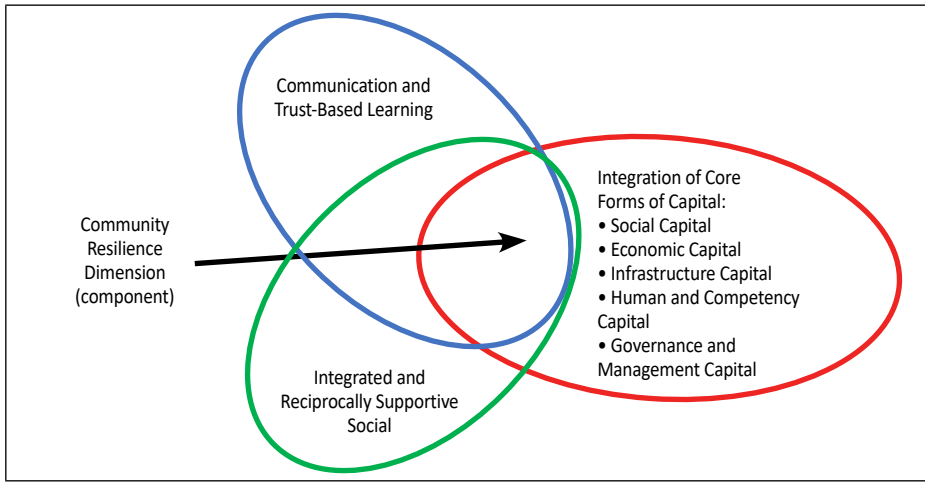
Aldrich further demonstrates that individuals possessing strong social networks are more capable of coordinating recovery activities effectively. In addition to facilitating the rapid dissemination of information and the provision of financial and material assistance, communities endowed with substantial social capital are better able to minimize the outmigration of people and valuable resources from affected areas. In the context of increasing pressures on governments and the growing likelihood of more frequent and intense natural disasters, a thorough understanding of the factors that contribute to effective recovery has become more important than ever.

Analytical Framework of Communication as a Component of Local Community Resilience Frameworks to Crisis Threats

The development of networks of interconnections that strengthen the resilience of local communities to crisis threats is based on the assumption that resilience does not emerge from individual resources or institutional activities alone, but rather from the quality of relationships among people, organizations, knowledge systems, communication processes and the capacity for cooperation and collective learning. A key element of this approach is the creation of dynamic local resilience networks in which individual actors mutually support one another, exchange information and learn adaptive mechanisms for responding to threats, including the activation and application of such mechanisms in emergency situations (Aldrich & Meyer, 2015: 257–262).

An important challenge is the development and discussion of concepts for constructing networks that integrate the social, cognitive and structural factors determining resilience (Figure 2). The concept presented here assumes a two-stage process: firstly, the deconstruction of cognitive barriers that hinder local actors in assessing risks and threats, and secondly, the integration of key elements of social capital through a nodal communication structure.

Figure 2. Factors structuring the framework of resilience network linkages in community resilience



Source: author's own work.

Local actors are understood as social leaders who perform communication and organizational hub functions. These leaders – including representatives of public administration, schools, community organizations, security and emergency services, parishes, entrepreneurs and informal neighbourhood groups – should be identified and connected within efficient cooperative structures. Their role would extend beyond information dissemination to encompass the cultivation of social trust, the facilitation of learning and collaboration, and the mobilization of residents towards collective action (Burt, 2000: 365–400).

The elements of social capital include the capacities for communication and learning within an environment of trust, operating through integrated and mutually supportive social networks. The central mechanism underpinning the functioning of such networks should be multidirectional communication, involving the continuous exchange of information among residents, community leaders and institutions. This communication model strengthens social capital because residents begin to perceive themselves as co-responsible for local safety and security. At the same time, transparency in communication and the rapid correction of misinformation increase trust among community members and in public institutions, thereby creating a positive feedback loop between communication and social capital.

Effective networking of local resources in the context of resilience building requires the identification of all significant resource-related factors that determine resilience. Among such factors are various barriers that impede accurate understanding and effective communication. It is therefore necessary to identify and neutralize psychological and cognitive barriers that hinder, or even prevent, community preparedness for crises.

During a pre-crisis period, these barriers distort individuals' perceptions of threats, while during the occurrence and continuation of a crisis they constrain adaptive capacities (Norris et al., 2008: 127–150). Such barriers are commonly conceptualized as heuristics and cognitive biases that influence the manner and accuracy of risk assessment and the interpretation of information under conditions of uncertainty, thereby affecting the quality of decision-making (Kahneman, 2011: 125–185).

In the operational preparedness phase, the most significant barriers include unrealistic optimism, the normalcy bias and the availability heuristic. These mechanisms cause residents and institutions to underestimate the actual level of risk, resulting in insufficient attention to potential threats, delayed preparedness measures, and inadequate development of organizational and material reserves (Lindell & Perry, 2012: 635–645).

Under crisis conditions, additional cognitive filters become activated, exacerbating decision-making chaos and hindering adaptation and transformation in response to crisis-related challenges. These include the anchoring effect, associated with the application of outdated response frameworks to novel problems, confirmation bias, leading to the selective acceptance of information consistent with prior beliefs, and groupthink, which limits critical analysis and the exploration of alternative solutions (Nickerson, 1998: 180–200).

Consequently, building social resilience should encompass not only the development of infrastructure and response procedures, but also the cultivation of cognitive competencies within local communities. Particular attention should be devoted to enhancing situational awareness of threats and fostering learning capacities that strengthen both the culture and quality of cooperation (Norris et al., 2008: 130–139).

The proper functioning of these relationships contributes to increased trust among diverse actors, which in turn enhances communication effectiveness. Effective communication strengthens the willingness to cooperate, while successful cooperation improves the utilization of resources and knowledge. This subsequently increases the effectiveness of crisis management activities and further reinforces trust in the system as a whole. Conversely, the absence of any of these elements weakens the others.

Accordingly, local community resilience should be understood as the capacity of the entire social system for self-regulation, learning and adaptation. Within this conceptual framework, local community resilience could take the form of local platforms enabling the integration of residents, civil society organizations, entrepreneurs and public administration bodies. Such platforms would need to operate continuously rather than solely during crises, thereby fostering enduring collaborative relationships, shared operational procedures, local information-exchange systems, and mechanisms of mutual support. As a result, communities would not only respond more effectively to crises, but would also develop enhanced capacities for learning and adaptation in the face of emerging and unpredictable threats.

Conclusion

It should be emphasized that the phenomenon of resilience cannot be adequately captured within the boundaries of a single academic discipline. Rather, multidisciplinary approaches are required to precisely identify its key dimensions. These dimensions must be linked to the fundamental characteristics of society and the communities that constitute it, as well as to the natural environment, technology and technological systems, culture, politics, and the human individual with his or her cognitive approaches to various aspects of life.

The resilience-oriented preparedness of local communities depends upon the proper identification of complementary configurations of competencies and responsibilities. On the one hand, these configurations should engage and utilize the resources, professionalism and creativity of personnel working across diverse institutions. On the other hand, they should effectively harness the potential and commitment of the community and its individual members.

The validity of such an approach to local community resilience requires the utilization of knowledge understood as a specific socio-technical configuration of information derived from three principal sources: (1) scientific findings, (2) meanings and content embedded within culture, and (3) subjective opinions circulating within communities, which are often simplified and shaped by stereotypes.

Based on this assumption, it becomes possible to pursue the practical realization of resilient and integrated communities. Such an undertaking may ultimately determine the success of building open, resilient and effectively functioning communities.

References

Aldrich, D.P. (2012). *Building Resilience: Social Capital in Post-Disaster Recovery*. The University of Chicago Press. https://doi.org/10.7208/chicago/9780226012896.001.0001

Aldrich, D.P., Meyer, M.A. (2015). Social capital and community resilience. *American Behavioral Scientist*, *59*(2), 254–269. https://doi.org/10.1177/0002764214550299

Andersson, E., Haase, D., Anderson, P., Cortinovis, C., Goodness, J., Kendal, D., Lausch, A., McPhearson, T., Sikorska D., Wellmann T. (2021). What are the traits of a social-ecological system: Towards a framework in support of urban sustainability. *npj Urban Sustainability*, *1*(14). https://doi.org/10.1038/s42949-020-00008-4

Bonanno, G.A., Galea, S., Bucciarelli, A., Vlahov, D. (2007). What predicts psychological resilience after disaster? The role of demographics, resources, and posttraumatic growth. *Journal of Consulting and Clinical Psychology*, *75*(5), 671–682. https://doi.org/10.1037/0022-006X.75.5.671

Beck, U. (2002). *Społeczeństwo ryzyka. W drodze do innej nowoczesności* (S. Cieśla, Trans.). Wydawnictwo Naukowe Scholar.

Burt, R.S. (2000). The network structure of social capital. *Research in Organizational Behavior*, 22, 345–423, https://doi.org/10.1177/0002764214550299

Chandra, A., Acosta, J., Stern, S., Uscher-Pines, L., Williams, M.V., Yeung, D., Garnett, J., Meredith, L.S. (2011). *Building Community Resilience to Disasters: A Way Forward to Enhance National Health Security*. RAND Corporation. https://www.jstor.org/stable/10.7249/tr915dhhs

Cronin, P., Ryan, F., Coughlan, M. (2008). Undertaking a literature review: a step-by-step approach. *British Journal of Nursing*, *17*(1), 38–43. https://doi.org/10.12968/bjon.2008.17.1.28059

Cutter, S.L., Burton, C.G., Emrich, C.T. (2010). Disaster resilience indicators for benchmarking baseline conditions. *Journal of Homeland Security and Emergency Management*, *7*(1). https://doi.org/10.2202/1547-7355.1732

Cutter, S.L., Barnes, L., Berry, M., Burton, C., Evans, E., Tate, E., Webb, J. (2008). A place-based model for understanding community resilience to natural disasters. *Global Environmental Change*, *18*(4), 598–606, https://doi.org/10.1016/j.gloenvcha.2008.07.013

Grant, M.J., Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies, *Health Information & Libraries Journal*, 26, 91–108. https://doi.org/10.1111/j.1471-1842.2009.00848.x

Green, B.N., Johnson, C.D., Adams, A. (2006). Writing narrative literature reviews for peer-reviewed journals: secrets of the trade. *Journal of Chiropractic Medicine*, *5*(3), 101–117. https://doi.org/10.1016/S0899-3467(07)60142-6

Kahneman, D. (2011). *Thinking, Fast and Slow*. Farrar, Straus and Giroux.

Khalili, S., Harre, M., Morley, P. (2015). A temporal framework of social resilience indicators of communities to flood: Case studies of Wagga Wagga and Kempsey, NSW, Australia. *International Journal of Disaster Risk Reduction*, 13, 248–254. https://www.sciencedirect.com/science/article/abs/pii/S2212420915300248

Kwok, A.H., Doyle, E.E., Becker, J., Johnston, D., Paton, D. (2016). What is social resilience? Perspectives of disaster researchers, emergency management practitioners, and policymakers in New Zealand. *International Journal of Disaster Risk Reduction*, 19, 197–211. https://doi.org/10.1016/j.ijdrr.2016.08.013

Lester, F.K. (2005). On the theoretical, conceptual, and philosophical foundations for research in mathematics education. *ZDM Mathematics Education*, *37*(6), 457–467. https://doi.org/10.1007/978-3-642-00742-2_8

Lindell, M.K., Perry, R.W. (2012). The protective action decision model: Theoretical modifications and additional evidence. *Risk Analysis*, *32*(4), 616–632. https://www.researchgate.net/publication/51234490_The_Protective_Action_Decision_Model_Theoretical_Modifications_and_Additional_Evidence

Magis, K. (2010). Community resilience: An indicator of social sustainability. *Society & Natural Resources*, *23*(5), 401–416, https://doi.org/10.1080/08941920903305674

Miles, M.B., Huberman, A.M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook* (2nd ed.). Sage Publications.

Morris, A.D., Mueller, C.M. (Eds.) (1992). *Frontiers in Social Movement Theory*. Yale University Press.

Naeem, M., Ozuem, W., Howell, K., Ranfagni, S. (2023). A step-by-step process of thematic analysis to develop a conceptual model in qualitative research. *International Journal of Qualitative Methods*, 22. https://doi.org/10.1177/16094069231205789

Nguyen, H.L., Akerkar, R. (2020). Modelling, measuring, and visualising community resilience: A systematic review. *Sustainability*, *12*(19), 7896. https://doi.org/10.3390/su12197896

Nickerson, R.S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology*, *2*(2), 175–220. https://pages.ucsd.edu/~mckenzie/nickersonConfirmationBias.pdf

Norris, F.H., Pfefferbaum, B., Wyche, K.F., Pfefferbaum, R.L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology*, *41*(1–2), 127–150. https://doi.org/10.1007/s10464-007-9156-6

Paré, G., Kitsiou, S. (2016). Chapter 9. Methods for Literature Reviews. In F. Lau, C. Kuziemsky (Eds.), *Handbook of eHealth evaluation: an evidence-based approach*. University of Victoria. https://www.ncbi.nlm.nih.gov/books/NBK481583/

Pawłowski, K.J. (2007). *Dyskurs i asceza. Kształtowanie człowieczeństwa w kontekście mistyki filozoficznej*. Wydawnictwo Benedyktynów.

Pfefferbaum, R.L., Pfefferbaum, B., Horn, R.L., Klomp, R.W., Norris, F.H., Reissman, D.B. (2013). The Communities Advancing Resilience Toolkit (CART): An intervention to build community resilience to disasters. *Journal of Public Health Management and Practice*, *19*(3), 250–258. https://doi.org/10.1097/PHH.0b013e318268aed8

Saja, A.A., Teo, M., Goonetilleke, A., Ziyath, A.M. (2018). An inclusive and adaptive framework for measuring social resilience to disasters. *International Journal of Disaster Risk Reduction*, 28, 862–873. https://doi.org/10.1016/j.ijdrr.2018.02.004

Satheesh, S., Benford, R.D. (2020). Framing and social movements: The social movement framing perspective. In G. Ritzer, C. Rojek (Eds.), *The Blackwell Encyclopedia of Sociology*. Wiley-Blackwell. https://doi.org/10.1002/9781405165518.wbeosf065.pub2

Sinha, D., Sinha, S. (2020). Managing in a VUCA world: Possibilities and pitfalls. *Journal of Technology Management for Growing Economies*, *11*(1), 17–21. https://www.researchgate.net/publication/343501669

Snow, D.A. (2022). Framing and social movements. In D.A. Snow, D. della Porta, B. Klandermans, D. McAdam (Eds.), *The Wiley-Blackwell Encyclopedia of Social and Political Movements*. Wiley-Blackwell. https://doi.org/10.1002/9780470674871.wbespm434.pub2

Snow, D.A., Benford, R.D. (1992). Master frames and cycles of protest. In A.D. Morris, C.M. Mueller (Eds.), *Frontiers in Social Movement Theory* (pp. 133–155). Yale University Press. https://www.researchgate.net/publication/246773271_Master_Frames_and_Cycles_of_Protest

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines, *Journal of Business Research*, 104, 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

Strategic National Framework on Community Resilience (2011). Cabinet Office.

Sztompka, P. (1980). Dialektyka teorii i działania w rozwoju społecznym. In J. Lipiec (Ed.), *Świadomość i rozwój* (pp. 317–318). Krajowa Agencja Wydawnicza.

Sztompka, P. (2012). *Socjologia. Analiza społeczeństwa*, Społeczny Instytut Wydawniczy Znak.

Sztompka, P. (2005). Ruchy społeczne – struktury in statu nascendi. In P. Sztompka, M. Kucia (Eds.), *Socjologia. Lektury*. Społeczny Instytut Wydawniczy Znak.

Tierney, K. (2014). *The Social Roots of Risk: Producing Disasters, Promoting Resilience*. Stanford University Press. https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&AN=790521

Toffler, A. (2001). *Trzecia fala* (E. Woydyłło, Trans.). Państwowy Instytut Wydawniczy.

Wohlin, C. (2014). Guidelines for Snowballing in Systematic Literature Studies and a Replication in Software Engineering. In *Proceedings of the 18th International Conference on Evaluation and Assessment in Software Engineering (EASE 2014)* (pp. 1–10). ACM. https://doi.org/10.1145/2601248.2601268

Analytical Frameworks of Local Community Resilience to Crisis Threats: Their Significance and Principles of Development

Abstract

This article highlights the importance of analytical frameworks in enhancing the resilience of local communities to crisis-related threats, as they enable the identification and systematic organization of key factors influencing a community's capacity to cope with crises. It emphasizes that effective resilience management should be grounded in a proactive approach that conceptualizes resilience as a dynamic property emerging from the interactions among social, technical, and environmental factors. Particular attention is paid to the role of residents' active engagement, agency and shared responsibility for local safety and security.

The author proposes two complementary analytical frameworks: the resilience capacities framework and the community resilience activities framework. The most significant dimensions of resilience identified include social, economic and institutional capital, as well as capacities related to resilience management. Special emphasis is placed on communication, social trust and collaborative networks, which facilitate effective information exchange and resource mobilization during crisis situations.

The article also underscores the necessity of identifying and mitigating cognitive barriers, such as unrealistic optimism, normalcy bias and groupthink, which may hinder accurate risk assessment and preparedness. The author concludes that local community resilience should be understood as the capacity of the entire social system to self-regulate, collaborate, learn and adapt in response to evolving threats and changing environmental conditions.

Keywords: community resilience, analytical framework, dimensions of the framework, key factors of community resilience

Author Contributions
Janusz Ziarko: Conceptualization, Methodology, Formal analysis, Investigation, Resources, Writing – original draft, Writing – review & editing.

Supplementary Materials
Not applicable.

Funding
This research received no external funding.

Ethics Approval Statement
Not applicable.

Informed Consent Statement
Not applicable.

Data Availability Statement
Data sharing is not applicable to this article as no new data were generated or analyzed in this study.

Declaration of Generative AI Use
No generative artificial intelligence tools were used in the preparation of this manuscript.

Acknowledgments
Not applicable.

Conflict of Interest
Janusz Ziarko declares no conflict of interest.