

A critical review of resilience in international relations

Abstract: *In the context of evolving challenges, EU member states are faced with vulnerabilities for which they are not prepared such as economic crises, populism, fake news, disinformation campaigns and pandemics, therefore the EU underlines the importance of resilience in countering these threats and achieving its foreign policy objectives. Although used in different areas such as psychology, economy, industry, in International Relations resilience was defined in different terms by various institutions, but the common ground resides in acknowledging resilience as the recovery and adaptation after an adversity such as an economic crisis or natural disaster. Moreover, resilience can be strengthened by preparing the population for better coping with future disasters and crises.*

Given the differences in understanding resilience between different international organizations, as NATO that approaches the term as the resilience of infrastructures, or the EU that refers mainly to the resilience of partner states but targets to strengthen EU's resilience for its global ambitions and the lack of readiness in our region, there is the need to foster research on this subject and to operationalise the concept. For the EU, Resilience is the central objective of its development & humanitarian assistance but it is also the response for how to sustain progress in the transformational agenda of the EU, although the EU admits there are not indicators of resilience and nor it specifies how this will be undergone.

*I attempt to approach the concept from an academic perspective, reviewing the literature on resilience and arguing that the study of political culture named *The Civic Culture* (1963) written by Gabriel Almond and Sydney Verba offers relevant insights on the study of resilience. Starting from the surveys they conducted in the United States, Britain, Italy, West Germany and Mexico,*

they aimed to establish in which type of political culture a liberal democracy is most probably to appear and develop and I consider that their indicators are also useful when studying resilience. I will create a working definition and present the main critiques towards the concept, to which I add the one that came into my mind after the Coron-

avirus pandemic started: is the state after an adversity the same as it was before or not? After a disaster there is only one way through the previous normality or there can also be a new balance? I could exemplify with the Coronavirus pandemic- if individual liberties are limited or social cohesion is broken the new situation is still resilient/normal?

In this context, the research question is which type of political culture reflects a resilient society. The purpose of the study is to operationalise the concept of resilience based on the set of indicators derived from Almond and Verba. The objectives of the research are to provide a critical literature review on resilience in International Relations; to operationalize the concept, establishing the dimensions, and indicators. The challenges of this research are related to the fact that there are significant differences among the definitions offered by the existing literature and the use of the concept by different international organisations such as NATO and the EU. The main sources would be the literature on political culture, resilience and official documents

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such as EU Grand Strategy, the 2012 EU Communication on Resilience, the 2013 Resilience Action Plan, the 2015 Resilience Marker and Compendium, the 2017 Joint Communication of the EP and the Council “A Strategic Approach to Resilience in the EU’s External Action”.

Keywords: resilience, civic-ness, social capital

Background and research approach

Although resilience becomes more and more popular among international organizations, „uncertainty about how to define, operationalize, measure, and evaluate resilience” [1] prevails and as a result multiple effort, either individual or collective are focusing on providing definitions and clarifications in the context of the specific field. The need for a framework to assess or enhance resilience was recognized even by RAND researchers, who initiated a study on open source literature intending to identify methods and approaches to achieve resilience with limited resources in the context of Air Force space systems, as innovative approaches are required in financial constrained times. Their study concluded that essential components of a system or organization such as „emergency response planning, organizational culture or structure, and training” need to be changed in the sense of assuring a better preparedness [1].

Gruber argues that neither the Department of State, nor FEMA assumed the responsibility for domestic preparedness in the 90’s, when terrorism was recognized as a new emerging security challenge and that afterwards much more independent governmental agencies started to be involved, leading to a strengthened Homeland defence in the US which integrated non state actors also meaning to reduce vulnerabilities. If terrorism is seen just as another disaster, the government’s role is that of an enabler, „task was to make an inventory, to establish incentives to encourage public-private partnerships tailored to the specific needs of the private sector establish comprehensive policies and programs, take a role in development and transfer of technology, raise awareness e.g. through education, and establish stronger partnerships between local responders and service providers”[2]. This can be observed in the 2003 Strategy that starts as a basic set of rules, whereas the 2006 Strategy offers a real organizational framework and integrates resilience as a main goal [2]. The Obama administration gave even more importance to resilience. Furthermore the 2016 Australian Defence White Paper offers a set of guidelines on enhancing resilience mentioning „refining existing structures, infrastructure and processes, establishing the capacities for the early and preventive identification of vulnerabilities” [3]. Although it was used both as a guiding principle and as an objective per se, the concept was not operationalized neither in theory nor in practice in the area of international relations.

Many international organizations defined it over time, among which The World Bank „The ability to withstand, recover from, and reorganize in response to crisis so that all members of society may thrive; forward moving” [4] or U.S. Agency for International Development which is more oriented on favouring resilience processes more than outcomes and integrating livelihoods[5]. In the following pages I will refer to the definitions and approaches of NATO and EU, as the term is massively used in recent strategic documents as the following table reflects.

Table 1

	European Security Strategy 2003	EUGS 2016	NATO Strategic Concept 2010	NATO Warsaw Communique
Resilience	0	40	0	17
Human rights	9	31	2	9
Democracy	8	23	8	17
Human Security	2	4	0	0

Source: my elaboration.

The purpose of this literature review is to overview the most prominent works in academia that examine methods and techniques for defining and evaluating/measure resilience in the context of international relations, not across a growing and diverse range of domains. I used a multifaceted method to choose the sources of the literature emphasizing papers on overall resilience, recovery and several case studies on disaster recovery. Starting from journal reputation and applicability of the content, I drafted a bibliography that contains papers which reflect the methods used by various international organizations to define and measure resilience. The bibliography presents also the critics and threads towards resilience that represent future directions of my research. The utility of this literature review is to allow the reader to identify which method is more appropriate for its organization/study.

Literature review and main definition

In order to provide a classification that includes also the most relevant definitions used in international relations I start from the one of Brand and Jax that presents definitions based on their degree of normativity [6].

Descriptive concept

Although it seems a new concept, resilience is studied since the 70's, when Holling defined it as "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" [7]. This definition refers to the survival or persistence of populations at the level of the ecologic system and was used more in ecology than in social sciences.

This first ecological definition is extended by Walker who argues that resilience is „The capacity of a system to experience shocks while retaining essentially the same function, structure, feedbacks, and therefore identity" [8], resuming basically to two characteristics, to absorb disturbances and to adapt, and adding to the previous definition some concrete objects to be measured – function, structure, feedback. Further elaborations of the ecological definition focus on the width of the domain, the resistance, in the sense of the width of the domain, the precariousness and the cross-scale relations [9].

In social sciences there were sociological definitions like the one of Adger who states that resilience is „The ability of groups or communities to cope with external stresses and disturbances as a result of social, political, and environmental change,, [10] and economic definitions like the one stating that resilience is „Transition probability between states as a function of the consumption and production activities of decision makers" [11] or the one stating that

resilience is „The ability of the system to withstand either market or environmental shocks without losing the capacity to allocate resources efficiently” [12:418] The first definition is innovative in the sense that explains how communities can cope with disturbances, meaning as a result of social, political or environmental change, but it is still too general as it does not offer any metrics. The following two definitions propose economic concepts and indicators, like the capacity to allocate resources after an adversity, but include also environmental shocks, which makes them more comprehensive.

Hybrid concept

There are definitions that can be characterized as hybrid, as the authors refer to the ecosystem-services area, arguing resilience is „The underlying capacity of an ecosystem to maintain desired ecosystem services in the face of a fluctuating environment and human use” [13:14] What is questionable regarding this definition is the fact that approaches human use as a disturbance and it is not clear if it can be used in social sciences. Another hybrid definition refers to the social-ecological area stating that resilience is „The capacity of a social-ecological systems to absorb recurrent disturbances (...) so as to retain essential structures, processes and feedback” [14:1036]. From this definition I retain two important features – that a social ecological system needs to absorb recurrent disturbances in order to be resilient and that the state after the adversity is characterized by essential structures, processes and feedback.

Normative concept

Most of current definitions of resilience are integrating resilience, adaptability, transformability as the approach focuses less on planning and controlling and more on preparing the population for better coping with adversities, or as Chapin puts it „preparing for opportunity or creating conditions of opportunity for navigating the transformations” [15]. Resilience is a normative concept, as it reveals „Metaphoric Flexibility” over the long term, as Pickett puts it [16:381]. Moreover, „giving meaning to the concept of resilience in adaptation strategies requires making normative choices” [17] which is another argument that resilience is a normative concept. Both authors refer to means than can increase resilience or measures that can be taken over a long period of time.

Working definition

Most authors create working definitions in the context of their field of research, for example [2] states that „resilience in the context of the NSS is not a replacement of security, but rather an improved version of what was left of the civil defence/emergency management mix”. Another example is the definition of resilience at local level in urban areas, that identifies a specific taxonomy but focuses on maintaining and „continue the normal operation of the urban environment”, recover „the pre-event state of equilibrium” and learn how to „to translate lessons learned from past experiences, local or otherwise, into concrete, actionable policy making and execute upon those policies within the context of the urban area”. According to Langeland, „Resilience is an indication of the ability of a system, architecture, or organization to meet the operating objective by maintaining or recovering critical capabilities when under

attack, stressed, or otherwise compromised” [1]. This definition is already more focused on organizations, and therefore applies better in international relations than previous ones.

Based on previous features drawn from the abovementioned definitions, I can state that the main definition in the context of international relations is those attributes of a community social capital that ease risk management and post crisis recovery. This definition focuses on a central feature of resilience which is the mutual influencing relation between the attributes of a community and the measures taken by the state authority, or in other words, this definition underlies the attitude of the community in relation with the measures taken. Other authors stress the importance of a „strong social compact between the state and society on their respective and mutual roles and responsibilities” [18]. The main definition needs to be categorized in key components or indicators, as I call them, in order to reveal both pre-event vulnerability to disaster and its adaptive capacity to recover [19] I choose to create a definition that comprises the relation between the community and the state also having into consideration the work of Almond and Verba and Putnam that will be presented in the section dedicated to assessment indicators.

There are many researchers stating that identifying „indicators for assessing resilience is challenged by its large variability, but at the same time it is critical to incorporate each type of resilience into the assessment of the system as a whole” [1]. This means that a proper definition of indicators allows and enables a multilevel analysis of resilience.

Critiques

One of the critiques that is not very much discussed but that I consider crucial is the one on equity. Chelleri argues that „equity places focus on the needs of those who are disadvantaged by relations of power and inequalities of opportunity, and on how these barriers to human flourishing can be identified, understood and addressed” [20]. From this point of view resilience fails to address both the power dimension and environment development challenges. A second critique is related to the fact that resilience is an excuse for disengagement, in the sense that mostly in international relations international organizations leave the responsibility to communities, arguing that their resilience is the primary wall in the face of an adversity [18]. Thirdly, resilience is often criticized for poorly theorizing social relations for example power [21]. I consider it important because food sovereignty for example is „explicitly political”, as Windfuhr [22] puts it and the good practices derived from it could help integrating power into resilience approaches.

Another critique is derived from a study on resilience in Germany „that the concept was essentially nothing but “old wine in new skins” [23]. I particularly refer to the works of Almond and Verba on political culture used a set of indicators which in practice are very similar to those of resilience. Resilience became more and more popular especially in international relations and security studies but there were already institutions and mechanisms for example in the area of civil protection and disaster relief. There is still not clear whether existing activities or projects are part of resilience, contribute to promote resilience or how they can be jointly devoted, but this is an important task of future studies, that would mean an important benchmark in comprehending security. For example, the “National Strategy on Critical Infrastructure Protection” (KRITIS Strategy) issued in 2009 and the “Civil Defence Concept” newly issued in the summer of 2016 are already contributing effectively to crisis prevention and crisis management in Germany [23].

There are also less conceptual critics, like the moment in which resilience should exist – before, during or after a crisis. There are authors arguing that resilience predictors are different from indicators and that both need to be measures previously. Other approaches focusing on organizations refer to the coping mechanisms and on the recovery phase arguing that attaining the original status is the sign of resilience. On the other side most of the studies derived from crisis management underly preventive measures and anticipatory adaptation.

Another critiques targets the types of events for which resilience applies, as common definitions refer to „events such as natural disasters, epidemics, or severe terrorist attacks” whereas other approaches argue that even chronic social aspects such as „high unemployment, inefficient public transport systems, endemic violence, or chronic scarcity of food and water hold the potential to significantly weaken urban structures and functions on a daily or regular basis”. Indeed, this is why I argue that a proper definition needs to be contextualized and I propose aside the main definition even some key aspects previously mentioned.

A last criticism focuses on the definition of the state following the recovery, questioning for example when can we talk about normality after the terrorist attacks in Paris or Brussels? Moreover, after a disaster there is only one way through the previous normality or there can also be a new balance? I could exemplify with the situation following a terrorist attack or the state following the Coronavirus pandemic- if individual liberties are limited or social cohesion is broken the new situation is still resilient/normal?

Assessment indicators and methods

This chapter is not intended to identify indicators that envisage all possible risks from any possible adversity, as this would be at least a difficult and at most an expensive process. Nevertheless, it is crucial to build a rigorous set of indicators, given the complexity of „assessing the various qualitative and quantitative aspects of resilience” [1]. I will present the indicators used by different international organizations and afterwards I will present the set of indicators derived from the literature review.

Different authors created measurements based on purpose, target audience, level [24], or object of assessment [25], but this paper focuses on the object of assessment, responding to the question what are we assessing. First of all, I consider it important to differentiate between types of resilience to which I attributed the organizations that use the respective type of resilience. As it is challenging to develop a universal set of indicators, I categorize by specific versus general resilience and the corresponding indicators. I define specific resilience as the ability to maintain concrete functions during a limited adversity starting from the definition of Langeland that defines it as „the capability to maintain mission functions during and following a specific threat or other event” [1]. General resilience is the ability to maintain functionality over a period with multiple adversities, starting from the above-mentioned authors definitions as „a measure of the ability to maintain operations over a range of unanticipated threats and events” [1]. I make this differentiation because specific resilience may boost general resilience but this is not mandatory if we think at a system resilient to power outages but not to earthquakes. Moreover, general social resilience is the ability of a community to resist to multiple adversities over a long period of time, whereas specified social resilience represents the preparedness for predefined adversities that can be assimilated to a recovery plan or procedures. General technical resilience is the ability of a critical infrastructure system to re-

sist under strain or under systemic failure, whereas specified technical resilience is the ability of a technical system to resist to a certain shock on a short period of time.

International organizations assessment methods

Many international organizations refer to resilience using different definitions, which are sometimes parallel. Nonetheless, each institution identifies different levels of resilience or uses the term without mentioning the level at which applies. Based on the study of strategic documents elaborated and implemented by NATO [26] and EU [27] [28], I can argue that each of them promotes a different type of resilience and uses the corresponding indicators or recognises the need to develop indicators. I will rather use the term criteria that indicator when studying the strategic documents because there is not a universally recognized set of indicators. The role of the following tables is to prove that a classification of resilience is not only useful but it already exists, although not expressly recognized.

Table 2

Type of resilience	International Organization
General social resilience	EU-NATO
Specific social resilience	
Specified technical resilience	
General technical resilience	NATO

Source: my elaboration.

General social resilience is reflected in EU's approach as the EU 2016 Grand Strategy argues that resilience is the mean to sustain progress in the transformational agenda of the EU and this refers to a broader period of time, like the abovementioned definition states. In most of the strategic documents EU's foreign policy objectives are based on strengthening state & societal resilience. However, The 2017 Joint Communication underlines the need to develop resilience indicators, although the EU already elaborated a Resilience Marker [29], Compendium [30], and moreover, on 7 of May 2017 the EU issued the Joint Communication of the EP and the Council named "A Strategic Approach to Resilience in the EU's External Action" [31]. Although the EU mentions the lack of resilience indicators, I will present in the following table some of the criteria used by the EU and whether they are used in the main strategic documents.

Table 3

Criteria	EUGS 2016	Joint Communication 2017
Resilience against hybrid threats	joint task forces between the EEAS and the Commission...Europol and Eurojust, the EU Intelligence Centre	Building on the Joint Framework on Countering Hybrid Threats...
Cyber security	reinforcing the cyber elements in CSDP missions and operations; support political, operational and technical cyber cooperation	Directive (EU) 2016/1148 of the European Parliament and of the Council – July 2016 – security of network and information systems
Strategic communication	The EU will enhance its strategic communications, investing in public diplomacy	Priority on effective operational cooperation and secure communication
Counter terrorism/violent extremism	deepen dialogue with the UN, while building broad partnerships	Counter-Terrorism dialogue to address the issue across all relevant policies, not just as a security response.
Critical transport infrastructure	Identified as a need	Links between the Eastern and Southern Neighbourhood countries, Iran and Central Asia
Cooperation with NATO & OSCE	Mentioned 17 times	Mentioned 5 times

Source: my elaboration.

General social resilience is reflected too in NATO's approach as it refers to recurrent challenges, a wide range of adversities and a long period of time. However, NATO uses also general technical resilience as it refers to specific systems – of transportation, energy, communication, as the following definitions argue: resilience is directed “against the full spectrum of threats, including hybrid threats, from any direction” and should insure “essential basis for credible deterrence and defence and effective fulfilment of the alliance's core tasks.” [26]. Resilience is meant to foster the North Alliance's long-term adaptation based on a series of objectives: “maintain and protect critical civilian capabilities, alongside and in support of military capabilities, and to work across the whole of government and with the private sector” [26]. In the following table I will present the criteria NATO uses to measure resilience and how they reflect in the main documents.

Table 4

Criteria	The 2010 Strategic Concept	The Communiqué of the NATO Summit in Warsaw in 2016
government continuity and basic services	?	Improve civil preparedness by achieving the NATO Baseline Requirements for National Resilience, which focus on continuity of government.....
resilient energy security	...energy security.... require greater international efforts to ensure their resilience against attack or disruption	A stable and reliable energy supply, the diversification of import routes, suppliers and energy resources, and the interconnectivity of energy networks are of critical importance and increase our resilience against political and economic pressure.
capacity to manage people's mobility	?	Decisions of Defence Ministers in February 2016 – on irregular migrant flows to Turkey, Greece, and the EU's Border Management Agency, FRONTEX
resilient resources of food and water	?	?
resilient systems of communications	...vital communication...	NATO has agreed a strategy on NATO's role in Countering Hybrid Warfare, which is being implemented in coordination with the EU
resilient systems of transportation	..vital...transport and transit routes...	The Alliance "will be capable of defending themselves in cyberspace as in the air, on land and at sea."

Source: my elaboration.

Specific social resilience as well as specific technical resilience are reflected both in the approaches of the EU and NATO, but they refer only to some areas. These two types of resilience are not the object of this research, as they can at most contribute to general social/technical resilience and do not influence the main definition. Based on the ways in which the term resilience reflects in the abovementioned strategic documents, I can state that both organizations use the same term to describe different situations, none of them explains how it can be achieved or measures and at which level and none of them explains the state of "normality" after the adversity.

Proposed set of indicators

I will further refer to general social resilience, identifying a set of indicators which integrate the ones used by Almond and Verba [32] in their study on political culture, the ones used by Putnam to measure the presence of a specific political culture and sense of coherence, an indicator used massively in recent literature. Almond and Verba define political culture as the totality of beliefs, shared values and norms and orientation towards politics. Based on their research, they argue that democracy can last in time as long as and only where is sustained by a certain type of political culture, meaning civic-ness. They differentiate between three ideal-typical political cultures – parochial (less awareness of the central government, less separation between local government and society, minimal specialization, acceptance of imposed social order), subject (hierarchy of rulers and ruled, power flow downwards, no questioning, obedi-

ence), participatory (expectations of society to influence rulers, state acts as a neutral actor) the latter describing in my opinion a resilient society, as it reflects the relation between the government and the citizens.

It is important to add also the insights derived from the work of Putnam because he considers that not any type of political culture supposes the existence of a civic culture and because he looks at what people actually do (number of associations, networks, newspapers, etc), not only at what they say they do. Putnam [33] identifies a correlation between institutional performance and the presence of a specific political culture (civic-ness) that supposes a predisposition of citizens towards politics supported by an interpersonal mutual trust and towards cooperation [34]. The author refers to a new concept, civic culture which resides on the existence of social capital. By social capital he understands the trust, the norms that govern living in common, the civic association networks, the overall elements that improve social organization. Almagisti argues that social capital can be considered part of political culture even if it is civic or not and that its analysis is essential for studying the state of contemporary democracies [34]. I consider these concepts are extremely relevant when studying resilience because they refer both to the norms and to the reaction of the community to these norms, as I argued in the main definition. Putnam's work is important as he used both qualitative and quantitative methods to conclude that social capital is a crucial variable in assessing institutional performances, although it was criticized for superficiality of the economic analysis. I prefer starting the assessment indicators from these concepts because they were created for the social area, not derived from ecology, like the literature review showed in the case of resilience, therefore I will present the indicators derived from Almond and Verba, then the ones derived from Putnam and afterwards the one derived from the resilience literature.

General social resilience Indicators derived from Almond and Verba:

1. The first indicator is represented by knowledge and beliefs about politics as it is important to have an overview of cognitive orientations that people tend to manifest in respect with politics.

2. The second indicator is represented by positive or negative feelings that people have toward political objects, as affective orientations are also important in an overall assessment. Political objects are represented by:

2.1. the political system in general

2.2. political parties, interest groups, political actors or input objects as he authors name them, based on the fact that these input objects facilitate the communication between citizens and institutions

2.3. government bureaucracies, agents of state authority as output objects that implement public policies

2.4. orientations toward the self and towards the others or more specifically role models/ actions of the ideal citizen.

3. Judgments about political options and processes as evaluative orientations are needed in order to understand people's knowledge and attitude towards more specific characteristics of politics.

General social resilience Indicators derived from Putnam:

4. Participation in associations

5. Interest in reading journals, as newspaper readership shows the interest of citizens towards community affairs

6. Participation in referendum that shows how citizens prove their interest for community issues as well as their commitment towards it

7. Preference voting, which is considered to be rather an indicator of weak civic-ness as results from the client-patron relationship.

General social resilience Indicators derived from resilience literature:

8. Sense of coherence

Sense of coherence appears more and more as one of the main indicators of individual and societal resilience [35], although I consider it only applies at societal level, because one's sense of coherence is not relevant. This indicator reflects „how people make sense of everyday reality and whether they view life and the world as comprehensible, manageable, and meaningful” [36]. In a general meaning, sense of coherence signifies on the one side the ability to manage stressful situations [36]; and on the other side the ability to protect and recover after an adversity; nonetheless this indicator influences survival and recovery [25]. I consider the definition given by DuPlessis is too general as it is quite similar with the definition of resilience per se. I still retain this indicator is useful as it is similar with indicator 2.4. derived from Almond and Verba referring to orientation towards the self and others and I choose to use it because it is very used in recent literature.

Conclusions

Resilience became a platform for interdisciplinary research starting from an emphasis on social/ecological systems and being used nowadays as the new leitmotif of NATO and EU. Google Scholar reveals more than 1 million results of the term resilience as resilience became a sort of lens used in many disciplines and academic fields. Thru this paper I showed how the definitions evolved over time and how they were embraced by different areas of social sciences, argued that the term needs to be adapted to the field of research and operationalized accordingly. I presented also the numerous critiques focusing on the generality of the definitions used in International Relations, the lack of connections with basic concepts like power or sovereignty or the scarcity of describing the “normal” following an adversity. In my opinion the insights derived from the works of Almond and Verba and Putnam may bring valuable clarifications on how to apply the term in social sciences in general and in International relations in particular. The limits of the research reside on the fact that the selected indicators refer only to community level, while resilience refers also to the national and individual level. Future directions of research concentrate on using The World Values Survey (WVS) as well as other cross-national projects that offer vast evidence on political and social attitudes to measure the indicators.

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References

- Langeland S. K., Manheim D., McLeod G., Nacouzi, G. 2016. How Civil Institutions Build Resilience. RAND Corporation. Accessed 04 04, 2020. <https://www.jstor.org/stable/10.7249/j.ctt1btc0m7.7>.
- Gruber, B. 2017. "The Difference Resilience Makes." (OIIP – Austrian Institute for International Affairs). Accessed 04 04, 2020. <https://www.ssoar.info/ssoar/handle/document/58229>.
- Australian Department of Defence. 2016. "Defense White Paper." Accessed 01 04, 2020. <https://www.defence.gov.au/WhitePaper/Docs/2016-Defence-White-Paper.pdf>.
- Arnold, M., Mearns, R., Oshima, R., Prasad, V. 2014. "Climate and Disaster Resilience." The World Bank 13. Accessed 01 04, 2020. <https://agris.fao.org/agris-search/search.do?recordID=US2014603246>.
- US AID, 2012. "Building resilience to recurrent crisis." Accessed 01 03, 2020. <https://www.usaid.gov/sites/default/files/documents/1866>.
- Jax, F. et al. 2007. "Focusing the Meaning(s) of Resilience Resilience as a Descriptive Concept and a Boundary Object." *Ecology and Society* (Resilience Alliance Inc.) 12 (1). Accessed 01 03, 2020 <http://dx.doi.org/10.5751/es-02029-120123>.
- Holling, C. S. 1973. "Resilience and stability of ecological systems." *Annual Review of Ecology and Systematics* 4: 1-23.
- Walker, B., L. Gunderson, A. Kinzig, C. Folke, S. Carpenter, and L. Schultz. 2006. "A handful of heuristics and some propositions for understanding resilience in social-ecological systems." *Ecology and Society* (4: 1-13): 2. <https://www.ecologyandsociety.org/vol11/iss1/art13/>.
- Folke, C. 2016. „Resilience” (Republished). *Ecology and Society* 21(4):44. <https://doi.org/10.5751/ES-09088-210444>.
- Adger, W. N. 2000. "Social and ecological resilience: Are they related?" *Progress in Human Geography* (3: 347-364): 347. Accessed 01 04, 2020. <https://doi.org/10.1191/030913200701540465>.
- Brock, W. A., K.-G. Mäler, and C. Perrings. 2002. "Resilience and sustainability: the economic analysis of nonlinear dynamic systems." In *Panarchy: understanding transformations in human and natural systems*, by L. H. Gunderson C. S. Holling, 261-289 273 . Washington, D.C., USA: Island Press.
- Perrings, C. A. 2006. "Resilience and sustainable development." *Environment and Development Economics* 11:417-427.
- Folke, C. et al. 2002. "Resilience and sustainable development: building adaptive capacity in a world of transformations." *Ambio* 31(5):437-440.
- Adger, W. N., Hughes, T. P., C. Folke, S. R. 2005. "Social-ecological resilience to coastal disasters." *Science* 309:1036-1039. Accessed 01 04, 2020. DOI: 10.1126/science.1112122.
- Chapin III, F. S., Carpenter, S. R., Kofinas, G. P., Folke, C., Abel, N., Clark, W. C.,... Swanson, F. J. 2010. "Ecosystem stewardship: sustainability strategies for a rapidly changing planet". *Trends in Ecology & Evolution*, 25(4), 241-249.
- Pickett, S. T. A., M. L. Cadenasso, and J. M. 2004. "Resilient cities: meaning, models, and metaphor for integrating the ecological, socio economic, and planning realms." *Landscape and Urban Planning* 69:369-384.
- Keessen, A.M.; Hamer, J.; van Rijswijk, H.F.M.W.; Wiering, M. 2013 "The Concept of Resilience from a Normative Perspective: Examples from Dutch Adaptation Strategies" *Ecology and Society*, volume 18, issue 2.
- Metre, L. V. 2016. "Fragility and Resilience." US Institute of Peace. Accessed 01 04, 2020. <http://www.usip.org/fragilitypolicybriefs>.
- Chandra, A., Acosta, J., Stern, S., Uscher-Pines, L. , Williams, V. M., Yeung, D. , Garnett, G., Meredith, S. L. 2011. *Building Community Resilience to Disasters*. RAND Corporation.
- Chelleri, L. et al. 2015. "Resilience trade-offs: Addressing multiple scales and temporal aspects of urban resilience." *Environment and Urbanization* 27(1), 181-198.
- Miller, F. et al. 2010. "Resilience and vulnerability: complementary or conflicting concepts?" *Ecology and Society* 15(3):11.
- Windfuhr, M., and J. Jonsén. 2005. "Food sovereignty: towards democracy in localized food systems." ITDG, Rugby, UK 24.
- Quinlan, A. E., M. Barbés-Blázquez, L. J. Haider, and G. D. Petreson. 2015. "Measuring

- and assessing resilience: broadening understanding through multiple disciplinary perspectives.” *Journal of Applied Ecology* 53(3):677-687.
- Hanisch, M. 2017. “Forward, Resilience! — Ideas on how to Strengthen Resilience in Germany.” Federal Academy for Security Policy.
- Quinlan, A. E., M. Berbés-Blázquez, L. J. Haider, and G. D. Petreson. 2015. “Measuring and assessing resilience: broadening understanding through multiple disciplinary perspectives.” *Journal of Applied Ecology* 53(3):677-687.
- Van der Merwe, S.E., Biggs, R. and Preise, R. 2018. “A framework for conceptualizing and assessing the resilience of essential services produced by socio-technical system.” *Ecology and Society (Resilience Alliance Inc.)* 23 (2). Accessed 04 01, 2020. <https://www.jstor.org/stable/26799110>.
- NATO. 2016. “Commitment to enhance resilience, North Atlantic Council, Warsaw Summit.” Accessed 04 02, 2020. https://www.nato.int/cps/en/natohq/official_texts_133180.htm.
- EEAS. 2016. “Shared Vision, Common Action: A Stronger Europe.” EEAS, EU. Accessed 04 02, 2020. https://eeas.europa.eu/topics/eu-global-strategy_en.
- Commission, European. 2017. “Joint Communication To The European Parliament And The Council.” European Commission, EU. Accessed 04 02, 2020. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017JC0021&from=en>.
- European Commission, 2014. Accessed 04 02, 2020. “Resilience Marker.” https://ec.europa.eu/echo/files/policies/resilience/resilience_marker_guidance_en.pdf.
- European Commission, 2014. “EU Resilience Compendium.” Accessed 04 02, 2020. https://ec.europa.eu/echo/files/policies/resilience/eu_resilience_compendium_en.pdf.
- EEAS. 2017. “A Strategic Approach to Resilience in the EU’s External Action.” Accessed 04 02, 2020. https://eeas.europa.eu/headquarters/headquarters-homepage_mk/27711/A.
- Verba S, Almond GA. 1963. “The Civic Culture: Political Attitudes and Democracy in Five Nations”. Princeton: Princeton University Press.
- Putnam, R. D. 1993. “Making Democracy Work: Civic Traditions in Modern Italy”. Princeton University Press, Princeton.
- Almagisti, M. 2016 “Una democrazia possibile. Politica e territorio nell’Italia contemporanea”, Carocci, Roma.
- DuPlessis, V.B. 2001. “Resilience theory: a literature review.” Military Psychological Institute South Africa.
- Eriksson, M., and B. Lindström. 2001. “Validity of Antonovsky’s sense of coherence scale: a systematic review.” *Journal of Epidemiology and Community Health (Journal of Epidemiology and Community Health)* 59(6):460-466. Doi: 10.1136/jech.2003.018085.