

SUSTAINABILITY, RESILIENCE AND WELLBEING CONVERGENCES FOR PLACE-BASED APPROACHES

Alexandru BĂNICĂ

Alexandru Ioan Cuza University, Iași, Faculty of Geography and Geology, ROMANIA
alexandru.banica@uaic.ro,  <https://orcid.org/0000-0001-7781-342X>

Ionel MUNTELE

Alexandru Ioan Cuza University, Iași, Faculty of Geography and Geology, ROMANIA
ionel.muntele@uaic.ro,  <https://orcid.org/0000-0002-6242-850X>

Marinela ISTRATE

Alexandru Ioan Cuza University, Iași, Faculty of Geography and Geology, ROMANIA
istrate.marinela@uaic.ro,  <https://orcid.org/0000-0002-1456-6772>

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ABSTRACT

The present article is a conceptual and bibliometric radiography of 'the new trinity of governance' (Joseph & McGregor, 2020) that includes sustainability, resilience, and wellbeing from the viewpoint of territorial approaches. First, the paper makes theoretical considerations of the three concepts by analysing their definition and characteristics. Second, the study proposes a bibliometric analysis of the three well-established concepts, taking into account the papers that include the relations between all three in a single framework. Third, we developed a content analysis considering only the most relevant papers in the proposed study area as we try to highlight the main theoretical and empirical implications of overlapping sustainability, resilience, and wellbeing from the viewpoint of place-based strategies and planning as reflected by current scientific research. The results show the prevalence of four major directions of research which include the three concepts as pillars for the theoretical and empirical approaches: 1) nature-centred assessments, 2) safe and sustainable human activities and critical services, 3) participative governance for planning human settlements, 4) individuals' and communities' culture and identities. Finally, the missing link that can transform all these convergent, but still diverse, perspectives is identified as being the capabilities theory of Amartya Sen. To accomplish this role, the classic theory was reinterpreted in a broader sustainability-related approach that takes into consideration the equity and wellbeing of individuals and communities, but also the equilibrium between nature and human development. Conclusively, if managed wisely, the new integrative approach could mark a paradigm shift that might push forward new ways of planning and governing sustainable, safe and liveable territories.

Keywords: multidimensional concepts, nature-based solutions, human development, governance, territorial capabilities, paradigm shift

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INTRODUCTION

The Context

We live in a “risk society” (Beck, 1992) confronted with larger and more numerous shocks that are continuous threats for nature and society (economic crises, geopolitical crises, environmental crisis including the still ongoing COVID-19 crisis). Resilience is the main concept to address this situation, but its occurrence comes in the better-established framework of sustainability, while the focus on wellbeing can also be seen as a form of response to crises (Joseph & McGregor, 2020). The former economic crisis that started in 2008, and the present COVID-19 crisis whose effects and implications are still difficult to be predicted represent moments in which academics, policy-makers and practitioners realised that current approaches of territorial governance are not always effective and appropriate. Also, all citizens should question the coherence and efficiency of current strategies and decision-making processes. Meanwhile, the long-lasting and more “systemic” crisis of climate change continues to represent the focus of the international community. The narratives of the environmental movement have already become a transversal topic that should shape our attitudes, activities, and behaviours.

In this context, some concepts need to be reinforced and evaluated in order to be integrated into a comprehensive framework that could generate proper instruments, strategies and actions at any spatial scale. On the one hand, sustainable development had been in almost 35 years the main term that shaped the international policies and pushed forward the necessary transition towards more balanced and integrated social, economic, and environmental actions. In 2015, the new Sustainable Development Agenda acknowledged the enormous diversity of situations, needs and priorities that must be tackled in different spatial contexts. Therefore, 17 goals were established to cover this high range of issues. Nevertheless, one of the main critiques that regarded the concept of sustainable development was the rather static, less adaptable and, therefore, sometimes ineffective failing to give expected results in many cases.

The main characteristic of the present period – the Anthropocene – is not just the magnitude of human impact on the natural environment, but also the rapid, irreversible, and large-scale changes that are induced by human pressure (Trischler, 2016). The chain effect or multiple feedbacks implies that both natural and social-economic systems can accumulate and/or increase into a point (tipping point) where new and unseen shocks and disasters emerge. As a consequence, the concept of resilience was reinforced and given tremendous importance, especially in the last ten years. Therefore, in the discussions surrounding the RIO+20 Conference, resilience was introduced as a new perspective in thinking sustainability in an age of instability (Brown, 2014). Sustainable development and resilience are not contradictory as some authors argue, but they are rather overlapping or being complementary.

Resilience gives development a sense of urgency and the acknowledgement of the need for safety and adaptation in the current times of chaos and unpredictability. Resilience makes systems not only more reliable but also aware of the reality of risks, which transform strategies and planning into more dynamic reiterative instruments that include projections of prevention, preparation, mitigation, adaptation, transformation processes, before, during and after a significant perturbation.

There are also critiques brought to the concept of resilience, one being that it does particularly include social justice and poverty abatement in its inner structure (Béné et al., 2014). Complementary, Brown (2014) addresses this critique from another point of view: resilience overlooks the conflicts over resources and the power imbalances. Consequently, when

focusing on development and human wellbeing through ecosystem services, for example, resilience studies fail to consider the actual needs and political actions that could enhance proper distribution and management.

At this point, the third concept – wellbeing – comes to complete the picture and focus the aim of both sustainable development and resilience towards increasing the happiness of people. It comprises multifaceted and multidisciplinary approaches and the inclusion of both material and immaterial, objective, and subjective components of peoples' life. All three concepts have many commons and differences or contradictions. They converge towards a systemic, but still an anthropocentric focus which makes them central in becoming the three pillars of governance. The bottom-up approach is a common ground, but it is important to stress the convergences and the contradictions that could push back or forward that theoretical common background. If harmonised, they could give birth to a real change of paradigm in approaching development.

The Pretext

The book of Joseph & McGregor (2020) is the starting point of the present study as it sets the fundamentals of the new unifying ideas. Sustainability, resilience and wellbeing are three of the most popular terms currently used in political and administrative documents, but also in scientific papers. It is worth mentioning that each of the concepts has its individuality and added value within the actual international context, but their connection and synergies are even more beneficial as they could induce a real paradigm shift that would reshape governance at different levels. They are all linked to the capacities and capabilities of people to address holistically the social and natural environments and to live in a less intrusive, but more comfortable and safer manner, for a long time, on our planet.

Meanwhile, the above-mentioned book points out a few issues that must be stressed as follows:

- the study of the “new trinity” is made difficult by the fact that we are facing ill-defined ambiguous boundary concepts, that promise a lot for politics and policies but fail in being clearly defined and measured;
- the trinity is best understood when taking into consideration the bigger picture, by integrating ideas on governing the population and its interactions with its wider environments; This demands complex systemic thinking that should replace simple linear models of governance.
- this approach helps in dealing simultaneously with the need for safety and durability in a challenging unpredictable world by facing challenges and becoming aware of the environmental crisis (see the “Attenborough effect”) and, therefore, taking attitude and tackling it. Therefore, it addresses both the need for change and the idea that things are beyond our control, so our goal should be to adapt and survive.
- the important future of this new approach is the appeal to human qualities and abilities to reshape the world which has solid foundations in ecology, new institutional economics and sustainability sciences, but also in the capabilities theory formulated by Amartya Sen and Martha Nussbaum. This theory envisages human development and builds it around freedom and opportunity and although it seems to lack a strong environmental basis, it is compatible with environmental sustainability.

- the understanding of complexity results in realising that it is difficult to measure sustainability, resilience, and wellbeing to effectively substantiate the strategies, decisions, and planning on solid ground.

The book of Joseph & McGregor (2020) offers some possible answers for the identified issues when setting the context, but they have to be tested by a more comprehensive approach on currently emerging research directions and ideas that could shape furthermore comprehensive theoretical and empirical developments. Taking into account the above-mentioned context and pretext, the present article aims to highlight the main features, dominant themes and implications of an emerging area of current international scientific research that could induce a paradigm shift in planning and development design & thinking by using the synergies of three fundamental concepts of our times: sustainability, resilience and wellbeing.

METHODOLOGY

The present approach starts with an overall theoretical background used to define the concepts, and analyse their characteristics, but also the relationships among them. This first broad analysis highlights the issues and the challenges of discussing a common framework as not only convergences but also divergences or contradictions should be discussed. To overcome the issue of too abundant yet contradictory and inconclusive literature, the present study proposes a bibliometric analysis of the three well-established concepts. The systematic assessment of the literature on the selected topic uses the well-known PRISMA flow method (Moher et al., 2009) in order to decide which studies will be used in the second part of the overall qualitative analysis that should identify the main features and trends regarding the “new trinity”.

We used papers that were published in journals indexed in Thompson ISI/Clarivate Analytics (exclusively in the Core Collection). The search “sustainability AND resilience AND wellbeing” on Web of knowledge (core collection) found 114 records. There were also five books and chapters of books that were used in the current assessment. The most important of them is the book representing also the departure point for the present study: the volume published at Palgrave Macmillan by J. Joseph & J.A. McGregor in 2020, entitled “Wellbeing, Resilience and Sustainability: The New Trinity of Governance”. From the total number of 119 references, 105 were found and screened. 39 articles were immediately eliminated due to their irrelevancy in relation to the topic. In the next step, other 31 articles were eliminated due to their lack of focus on or link to place, territory, planning or spatial identity. Finally, only 35 studies were included in the qualitative synthesis (Figure 1).

The results of the bibliometric analysis (i.e. the 35 selected studies) were used to ground a content analysis that emphasised the main research areas and topics encompassing the proposed framework. The actual trends and the future directions were analysed from their multi-disciplinary and multi-dimensional perspectives.

Finally, the implication of capabilities theory and the spatial planning perspectives were brought into discussion in order to complete the highlight of this research: to sketch new possibilities of place-based policies.

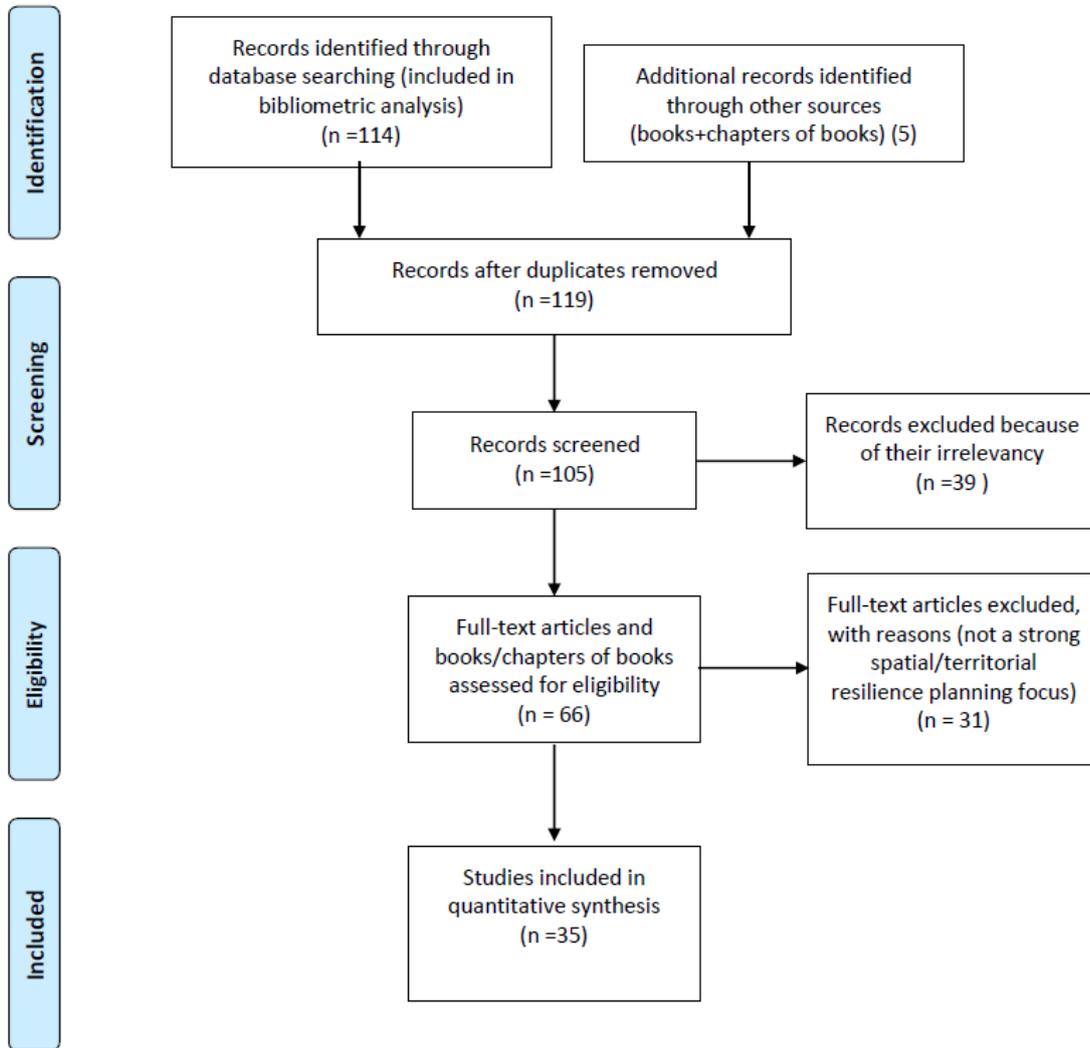


Figure 1: Prisma flow methodology

Source: The authors

RESULTS AND DISCUSSION

Theoretical background. Defining and connecting the concepts

In a certain way, all three concepts are too fuzzy, loose, unclear, large umbrellas that include a large variety of things. In fact, defining each of the three concepts is not easy as they lack clear definitions or get different definitions in different contexts. Brand and Jax (2007) refer to this aspect as the ambiguity of boundary objects.

Acknowledging the connection among all these concepts is fundamental, but there are also tensions and discrepancies among them. Therefore, we will first define each of the terms, in general, and from the territorial perspective and then we will try to discover not just the areas of interest from the empiric point of view but also the actual emerging attributes induced by

the reunion of the three conceptual approaches. In fact, all three concepts (sustainability, resilience, and wellbeing) can be considered emerging properties of social-ecological systems.

1. Sustainability is (maintaining) long term system-wide viability and wellbeing/non-decreasing quality of life and environment. It is highly dependent on (limited) resources and includes active processes that result in increased quality and stability through continuous adaptation to new conditions. It was the political catchphrase for the last 35 years, promoting intra- and trans-generational long-term equity, but the transition towards sustainable development has not been accomplished yet (and there is a very long way ahead). Nevertheless, it is well documented that sustainability needs a systemic/integrative perspective that will connect, for example, human wellbeing and ecosystems' vitality (Helne & Hirvilammi, 2015).

2. Resilience has various definitions in various disciplines, but it is usually related to the capacity of a system to successfully deal with change (Szaboova et al., 2018), therefore it provides a better understanding of change as a multi-dimensional, cross-scale and non-linear process (Brown, 2016). A common definition of resilience states it as the ability of a system (ecosystem, region, city, community or person, etc.) to respond and adapt to rapid change, to absorb or withstand shocks and changes, to recover and to reorganise and persist still retaining essentially the same functions, structure, identity, and feedbacks (Walker et al., 2004). As such, resilience is a characteristic of systems that determines the overall ability to meet their design requirements under uncertainty (Metcalf, Kijima & Deguchi, 2021). Hall and Lamont (2013) define social resilience as the multi-scalar and dynamic capacity of groups, classes, organizations, communities, or nations to sustain and advance their wellbeing while confronting challenges to it (Hall & Lamont, 2013). Resilience thinking adds more strategic meaning to the sense of protection, security and safety from numerous threats that occur in the society, economy, or environment.

3. Wellbeing is also a complex multidimensional concept (biomedical, psychological, economic, socio-politic dimensions), difficult to be defined by associated terms such as happiness, health, and prosperity. Nevertheless, wellbeing is thought to include "all the things that are good for a person or a group of people, and which constitute human flourishing and the pleasures enjoyed and displeasures avoided" (Onyango & Kangmennaang, 2020). Breslow et al. (2016) define human wellbeing as "a state of being with others and the environment, which arises when human needs are met, when individuals and communities can act meaningfully to pursue their goals, and when individuals and communities enjoy a satisfactory quality of life" (p. 1). Alcamo and Bennett (2003) and Fisher et al. (2014) discuss wellbeing in relation to five components: basic material for a good life, health, good social connection, security and freedom of choice and action. It is also stated that wellbeing/quality of life is directly and indirectly influenced by the resilience and sustainability of the territory, but the relationship is not linear (Bănică & Muntele, 2020).

From our perspective, sustainability is the overall background that is and will represent the main development paradigm, resilience is the "concept of our times" that enriches and redirect sustainability towards a more dynamic perspective that is oriented towards the actual rapid and sometimes overwhelming changes, challenges and crises. Finally, human wellbeing remains the main purpose of current transformation as anthropocentric vision continues to shape and govern our world (Figure 2). As such, it remains the metric of success for our current human-centric perspective of development (OECD, 2018).

The theory that links all three concepts is systems theory. We can envisage resilience as an attribute of systems, while sustainability and wellbeing are goals that must be attained, but

they are all emergent features that result from a functional architecture of interdependent systems and subsystems.

All three concepts can be seen as both outcomes or processes depending on the perspective (i.e. they can represent a “desired state” or a way towards that state). Sustainability can be considered both a goal/strategic focus to survive and strive for a very long period or a conscious process of achieving more balance by an integrative and comprehensive perspective on systems at different levels (Pirages, 1994). We tend to embrace the second perspective by considering sustainability as a path forward and not a successful and definitive finish (Bănică, 2010).

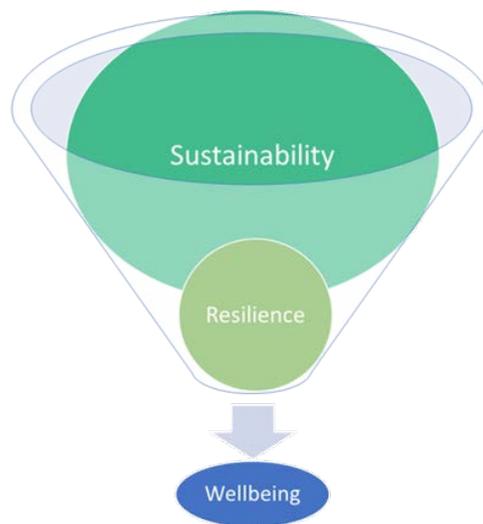


Figure 2: The basic relation among sustainability-resilience and wellbeing

Source: Own representation

In the case of wellbeing, one can differentiate eudaimonic approaches – focusing on the process of living well and using meaningful actions consistent with one’s values to achieve wellbeing – and hedonic approaches – focusing on the outcome (i.e. the happiness and pleasure resulting from one person’s actions and experiences). Finally, resilience can be understood as a process of preparing, absorbing, recovering, adapting or transforming after a shock or a crisis, or it can be envisaged *ex-post*, as the outcome that can be observed after the system recovered (i.e. the result of successful actions that aimed for the recovery of the system).

The table below synthesises the main features and compares the three concepts (Table 1). One should notice the sustainability and wellbeing are more related, despite their different origin (one rooted in ecology, the other in social sciences), as they are both normative, oriented towards stability, efficiency, provision of basic needs and inclined towards social equity. One main difference lies in the more anthropocentric perspective of wellbeing when compared to the system-centred approach of sustainability. Meanwhile even though sharing the common ground with sustainability (their ecological origin, if we consider the modern definition of resilience after Walker et al., 2004), resilience has a more dynamic, strategic-oriented perspective, integrating the uncertainty and the presence of turbulences/shocks within the planning process, therefore addressing the challenges of our turbulent world from a different perspective.

Table 1: Convergences and divergences among sustainability, resilience, and wellbeing (apud Bănică, 2021, completed and modified)

Criteria	Sustainability	Resilience	Wellbeing
Origins	Ecology - maintain ecosystem services	Engineering, Psychology. Then reshaped in Ecology and Social sciences – society is flawed	Philosophy, Social sciences, Psychology
Goals	Normative ideals (environmental protection, intergenerational and intra-generational equity)	Strategic ideals (self-organisation and adaptation to environmental risks)	Normative ideals (standard of living, quality of life)
Assumptions for normality	Stability and balance	Constant change and even chaos	Stability and balance, incremental positive change
Objectives	Efficiency and resource management, evolution of complex systems and mitigating change Long term stability	Redundancy, flexibility to change, response to external factors, system performance in the face of crisis Regaining equilibrium as fast as possible	Enhancing productive capacity Meeting basic needs Fulfilment of aspirations
Needs	Provision of basic needs	Capacity to provide basic needs in the turbulent environment Sustaining system functions and survival for long term	Provision of basic needs Individual satisfaction
Emphasis	Continuity Reliance on globally accepted standards Prioritises outcomes	Obstacles; turbulences Emplaning total potential Prioritises process Developing new responses	Reliance on globally accepted standards Subjective standards Prioritises outcomes
Development	Provision of intergenerational justice to reach basic resources	Knowing how to provide what is needed in specific time, place, and case Preserving knowledge and information	Knowing how to provide what is needed Provision of intra-generational justice to reach basic resources
Research focus	Overconsumption of resources and carbon footprint	Climate change and disaster management	Health and social care, happiness

Current state of research. A bibliometric analysis

The rapid diffusion of the work integrating sustainability, resilience and wellbeing in a single framework is a recent phenomenon that appeared after 2007 and became prominent only in the last five years (more than ten articles/year after 2016 and even more the twenty articles/year in the last two years). Actually, the total number of articles found in the Clarivate Analytics Core Database (114) is not impressive, but the average number of citations (21,09) shows that the articles are not marginal as, on the contrary, they represent a trend in the current scientific literature (Table 2).

Table 2: Bibliometric review – initial selection

Bibliometric review	
Results found	114
Sum of the Times Cited	2,404
Average Citations per Item	21.09
h-index	20

If looking at the emergence of the focus articles in the last 15 years (Figure 3), the first nine years (2007-2015) were just marginal approaches (less than ten articles/year in ISI database). Since 2016, the appearance of scientific articles that included the sustainability-resilience-wellbeing framework has been more consistent, while the increase has been exponential. The registrations for 2021 cover only six months, but the positive trend seems to maintain.

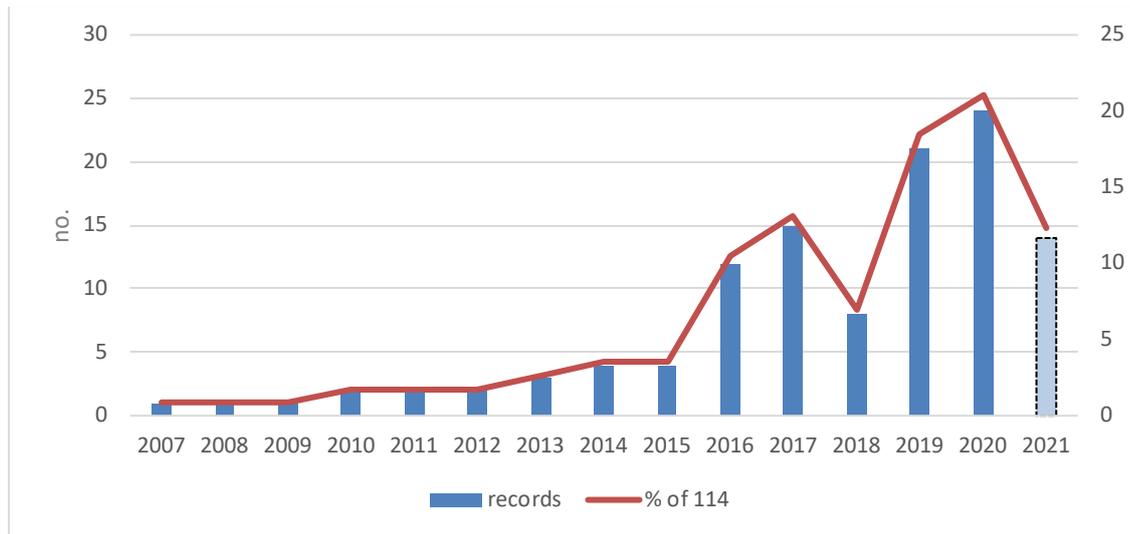


Figure 3: Publication year of the selected articles

The citations of these particular articles show a similar trend (Figure 4), with a delay of approximately two years, but the exponential growth rate was even more pronounced.

If looking at the distribution of authors' affiliations (Figure 5), some consistent geographical patterns can be noticed. The English-speaking countries dominate the hierarchy (USA, England, Australia, Canada, Scotland, New Zealand). Other countries from Europe with a significant

number of authors approaching simultaneously the three discussed concepts are Sweden and the Netherlands. In addition, there are five authors affiliated with universities or research institutions in China.

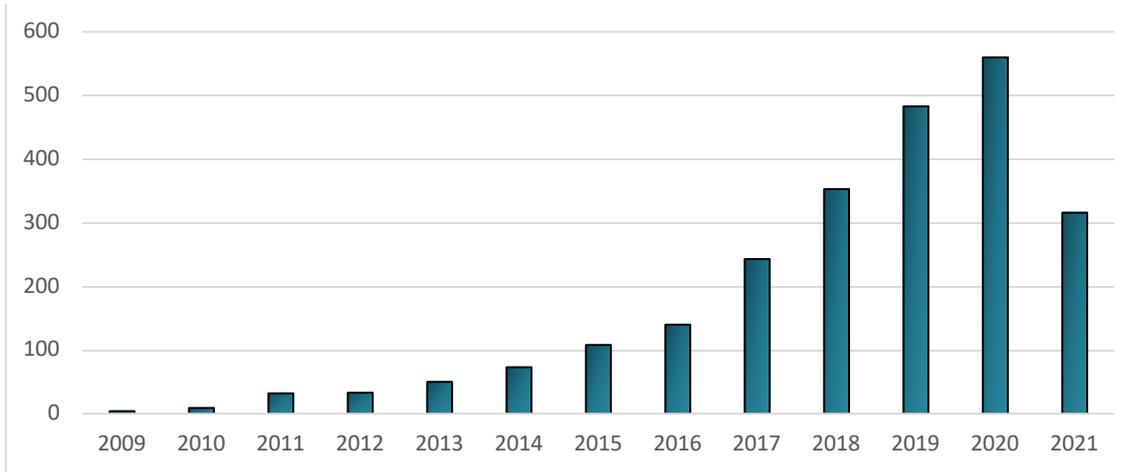


Figure 4: Number of citations of the selected articles (1st of July 2021)

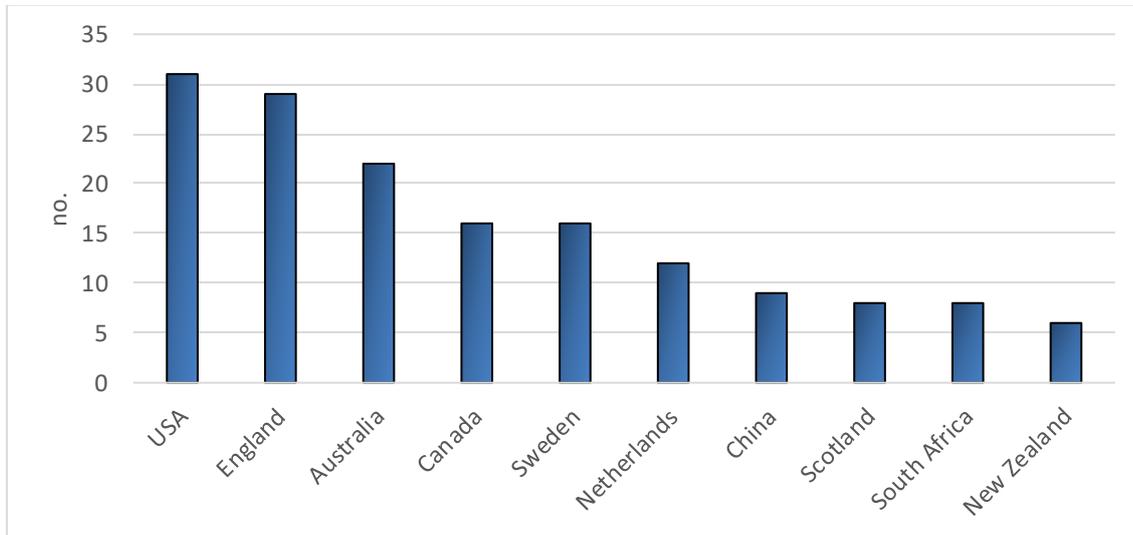


Figure 5: Distribution of selected articles by (first ten) counties (% of 114) (1st of July 2021)

Content analysis – present and future trends of the sustainability-resilience-wellbeing common framework

The in-depth analysis of the 35 selected papers has been very insightful in identifying the main areas that use the integrated framework of the “new trinity” of governance.

First, only a few theoretical reviews included all three concepts, but they were very useful to set the general picture. Some of these theoretical approaches are focused on nature-based socially and economically sound solutions in the process of planning (Helne & Hirvilammi, 2015; Szaboova et al., 2018). Others relate the conceptual framework to different perspectives of socio-economic development (Grant, 2010), including degrowth theory (Paulson, 2017).

Second, from the empirical side, the main topics that unify the three above-mentioned concepts or, at least, combine them in different share are extremely diverse. Although one cannot make a clear divide between the two, we identified some recurrent themes: A) nature-based approaches; B) safe and sustainable human activities and critical services, C) participative governance for planning human settlements, and D) culture and identity of individuals/communities.

A. Nature-centred approaches

Most of the approaches are focusing on ecosystems' health and their services (Liu et al., 2007; Browne & McPhail, 2011; Fisher et al., 2014; Breslow et al., 2016; Van Holt et al., 2016; Shahidullah, Choudhury & Emdad Haque, 2020) and consequent related nature-based solutions and green infrastructure (Childers et al., 2019; Fastenrath, Bush & Coenen, 2020; Bayulken, Huisingsh & Fisher, 2021; Ossola & Lin, 2021;). Nature-based solutions (NBS) are both tools to address complex challenges of socio-economic systems, but they are also a real bond among the three central concepts of our study. In this context, one insightful assessment argues that long-term sustainability and balanced development is based on "the fundamental dependence of human wellbeing on ecosystem services; the importance of measuring wellbeing; the value of addressing environmental problems via an etiological approach; the importance of decoupling and understanding shifting baselines and tipping points; and the role that resilience and its elements must play in transitioning to a sustainable future" (Browne & McPhail, 2011, p. 1). Thus, the environment can be considered the basis of any sustainable resilient human system. Therefore, people should limit the negative impact on the biosphere while promoting human wellbeing (Samuelsson et al., 2018).

A good example is the scaling-up of urban forest planning concerning the multiform, multifunctional, and multidisciplinary place-based approaches in the case of Melbourne (Australia) (Fastenrath, Bush & Coenen, 2020). It is a model of integrating human-environment interactions in a coherent sustainable and resilient system (including specificities: institutional path-dependencies geographic features, socio-economic factors). Moreover, Childers et al. (2019) highlight the role of green infrastructure and nature-based solutions in general to ensure sustainability and wellbeing in cities.

Other scholars use similar approaches in analysing urban challenges such as air pollution, heat waves, flooding, drought, biodiversity loss, etc. by highlighting possibilities to be addressed by different sustainable solutions such as urban forests, river restoration, parks, green roofs and walls, etc. that could also increase the quality of life (Fastenrath, Bush & Coenen, 2020). Scholars recognise the fact that nature-based solutions embed sustainability thinking and represent a way to operationalise the understanding of ecosystem processes in policymaking, ensuring better practices, safer environments, and higher quality of life (Bayulken, Huisingsh & Fisher, 2021).

From a similar perspective, Fisher et al. (2014) analyse the intrinsic relations between ecosystems services and social issues such as poverty. Taking into account that the poorer social categories may have issues in accessing certain ecosystems services, the authors propose an Ecosystem Services and Poverty Alleviation (ESA) framework as an assessment of the contribution of the environment to human wellbeing. The conclusion is that the capacity of people to access and benefit from ecosystem services is linked to: a) endowments and entitlements, b) natural, social, economic and physical capital, c) preferences, and d) other means (Fisher et al., 2014). This directly links our framework to Amartya Sen's capabilities theory.

In cities, current patterns of planning and economic development profoundly alter the natural environment, reduces biodiversity, and ultimately threatens human wellbeing. Therefore, Heymans et al. (2019) argue that a more harmonious relationship is desired. Urban planning and design must be based on multi-disciplinary and cross-disciplinary integration that applies concepts related to sustainability in a given spatial framework. This approach is known as “urban consonance”. In a similar perspective, Lehmann (2021) analyses the way big cities look for nature-based solutions to meet the challenges of climate change, biodiversity loss and major resource depletion. This article discusses the positive aspects of applying the concepts of urban regeneration and reconstruction using nature-based solutions (NBS). Other authors propose the integration of these solutions as a main strategy in urban planning, in order to strengthen urban resilience and slow down the decline of biodiversity (Heymans et al., 2019). Green spaces in cities contribute to healthier and more liveable cities. However, many urban areas do not provide residents with easy access to green space. Complementarily, improving access to green spaces and expanding gardens and parks offer many benefits, such as increasing control of urban floods, reducing biodiversity loss, increasing food security and restoring a favourable urban microclimate.

Other approaches argue that the presence of nature creates positive individual experiences (Samuelsson et al., 2018). Samuelsson, Colding & Barthel (2019) create typologies of experiential landscape, linking urban scales to individual experience (positive and negative) operationalising resilience principles. Experiences become mediators between environment and wellbeing. The relation between ecosystems services, sustainability, resilience and community wellbeing is illustrated, for instance, in the case of a wetland of north-eastern Bangladesh (Shahidullah, Choudhury & Emdad Haque, 2020).

B. Safe and sustainable human activities and critical services

When applied to the rural areas, the “new trinity” of governance is usually included in agricultural ecosystems sustainability (Alston, 2012; DeClerck et al., 2016; Antunes et al., 2017; Makate, Makate & Mango, 2017; Rockström et al., 2017; Venkatramanan & Shah, 2019). As agriculture was, for a very long time, the basis of human survival and wellbeing, sustainability and resilience of this activity are highly important. A resilience-based approach of ecosystems services and agricultural ecosystems services is proposed by De Clerck et al. (2016). Other integrative perspectives are presented in the areas of fisheries (Calhoun, Conway & Russell, 2016; Kpanou et al., 2021) and food sustainability (Martin, Clift & Christie, 2016; Ančić, Domazet & Župarić-Iljić, 2019; Farrier, Dooris & Morley, 2019). In an even broader complex systems approach, Talukder et al. (2020) make a very comprehensive literature review of agriculture sustainability by dividing the topics into seven groups: maintaining resilience, adaptation and transformation, ensuring system performance, involving stakeholders, mixing interdisciplinary views, integrating scales, and practising good governance. A holistic approach that would really be a path towards sustainability, resilience and wellbeing includes complex interactions between the agriculture itself and culture/local identities, economy, society, and the environment.

If introduced and practised in cities, agriculture becomes a good vector of sustainable food production. Nevertheless, when analysing the contributions of urban agriculture to the nutritional, ecological and social sustainability of cities, Martin, Clift & Christie (2016) show that food production is, in fact, low in relation to the population density in the area and that most of the urban food continues to come from rural areas, beyond urban peripheries. The

benefits of urban agriculture are not just agronomic or ecological, but, to a higher extent, social. An important benefit for citizens is the ecological knowledge and the understanding of the role that organic food can play in promoting healthy diets and environmental sustainability. In fact, the benefits of urban agriculture differ depending on place specificities, population structure and density, operational scale, soil quality, the availability of workforce and the openness of consumers.

Other areas where the proposed integrative sustainability-resilience-wellbeing model can be found are critical domains such as energy (Lee et al., 2016; Gatto & Drago, 2020) and water (Rockström et al., 2014; Case, 2017; Wang et al., 2021). Lee et al. (2016) discuss the energy infrastructure within the urban metabolism and the systemic role to sustain resilient and prosperous communities. They analyse some specific issues such as innovation and experimentation, lock-in, balance, resilience and governance. Energy is one of the most suitable areas of application of resilience approaches and policies, especially in terms of electricity production (Gatto & Drago, 2020). As a multidimensional concept, energy resilience relates to the dimensions of sustainability by overlapping economic, social, and environmental issues. Due to the complexity of the phenomenon, energy resilience can be effectively outlined using aggregated/composite indicators. The analysis of Gatto and Drago (2020) points out that energy resilience varies considerably from country to country, while the national GDP plays an important role in sustaining proper policies.

Meanwhile, Rockström et al. (2014) argue the “water is at the heart of the transition to global sustainability” (p. 7). The global hydrological cycle is influenced by humans who are the dominant force behind the steep changes in water resources availability around the world and in regulating the resilience of terrestrial systems. The study highlights the critical influence of water for the resilience of large-scale socio-ecological systems and that, by controlling major modifications in the hydrological regime and maintaining stable environmental conditions, one can protect human wellbeing. The article addresses the changes induced by human society on the stability of the rainfall regime through intensive use of agricultural land, excessive use of freshwater resources, overexploitation of groundwater and increased risk of pollution. The intensity with which these phenomena manifest in the Anthropocene changes the political agenda of water resources management, from their efficient use to the focus of interest on water resilience. In this case, resilience includes integrated land and water management, supporting ecological functions as well as managing what may be called “green water” (Rockström et al., 2014).

C. Participative governance for planning human settlements

Other papers explore wellbeing within the context of human settlement planning (Monteiro et al., 2012; McPhearson et al., 2015; Samuelsson, Colding & Barthel, 2019; Caparros-Midwood, Dawson & Barr, 2019; Shekhar, Schmidt & Wehling, 2019) and urban infrastructure governance (Willmore et al., 2018), combining current debates related to climate change, sustainability and resilience. As more and more people live in larger settlements, the need to understand what wellbeing means and how it can be approached in cities from a spatial planning perspective increases.

Contemporary global political decisions, including the New Urban Agenda (NUA), support cities to increase people’s wellbeing by declaring it a major goal in planning practices. However, research exploring wellbeing in human settlements from a spatial planning perspective is still relatively reduced in number. Shekhar, Schmidt & Wehling (2019) present an interdisciplinary

approach to wellbeing and propose a model. In human settlements, wellbeing is based on three pillars: participation and involvement, accessibility, identity, and safety. He also discusses the relationship between welfare and sustainable development and argues that by addressing people's wellbeing, settlements can also become more resilient and sustainable. The merit of the paper consists in highlighting the prominent spatial characteristics of wellbeing and emphasises the increasing attention that wellbeing receives in political formulations. Finally, it is concluded that, although a universal definition of wellbeing remains debatable, understanding wellbeing in human settlements as a spectrum of attributes and aspects that depend on their context can contribute to formulating policies that improve human wellbeing and make settlements more sustainable and more resilient.

Meanwhile, urban areas need to reduce their greenhouse gas emissions and increase their own resource efficiency and productivity, consequently creating more resilience to climate change and extreme weather conditions and increasing their wellbeing, all these without undermining other development goals. Prioritising each objective in isolation would lead to considerably different spatial planning structures and the emergence of conflicts, exposing to conflicts between several objectives. In this context, decision-makers should create optimal spatial strategies for low-carbon, low-poverty and low-risk cities, but these goals are sometimes irreconcilably conflicting and cannot be maximised simultaneously. Consistent efforts that imply the collaboration of numerous stakeholders and the authorities' openness should minimise these conflicts and develop strategies to simultaneously improve urban sustainability and reduce the risks posed by natural and human-induced hazards (Caparros-Midwood, Dawson & Barr, 2019).

D. Culture and identity of individuals/communities

Moreover, there is a significant number of the selected papers that refer to Community resilience to disasters and particularly to climate change (Sweet & Caudwell, 2017; Gyawali et al., 2020; Imperiale & Vanclay, 2020, 2021; Jacobson, 2020). One of the most interesting approaches states that disasters can be also seen as opportunities to build back better, not just houses or infrastructure, but also more sustainable wealthy and resilient societies. Building resilience at all levels of socio-ecologic governance is a multi-scale integrative process. Disaster risk reduction should be seen as a matter of public health, population wellbeing and resilience and not necessarily linked to militarisation, police actions, surveillance, and exclusion areas (Imperiale & Vanclay, 2020). The focus should be moved from exclusively (efficient) emergency intervention towards creating a "glocal culture of resilience" (i.e. socially sustainable governance of "risk society" and a both global and local culture of community wellbeing and resilience) (Imperiale & Vanclay, 2021).

Referring to climate change, and overall stressor which is also the driver of many other risks/catastrophes, Cunsolo and Ellis (2018) analyse the different ways it affects the wellbeing of human communities. One point made in their research refers to the "feelings of grief" caused by the loss of species, ecosystems, and landscapes. Moreover, the authors introduce the term "ecological grief" to describe society's response to experienced or anticipated ecological losses, a reaction that is becoming more frequent as the climate impact worsens (Cunsolo & Ellis, 2018).

Governance design, but also individual, family and community engagement represent a convergence point for many of the above-mentioned papers, but they are the main focus of some other research. One of them highlights the governance challenges in complex multi-scale

systems associated with epidemics in a pathway approach (Leach, Scoones & Stirling, 2010). The key elements are flexibility, diversity, adaptation, learning and reflexivity, to which are added the highlighting and support of alternative ways of sustainable development. Local development can be implemented and supported by acting simultaneously in three directions: develop and harness local community, business and learning assets. Promoting activism and involvement at the local level stimulates awareness, a sense of belonging and, finally, the wellbeing of the whole community (Farrier, Dooris & Morley, 2019).

There are papers relating, in a more comprehensive manner, the community culture and identity to the sustainability-resilience-wellbeing trinity (Brasche, 2008; Cunsolo & Ellis, 2018). One research (Brasche, 2008) tests the link between cultural resilience and social welfare, taking into account the role economic arguments play in negotiating the impact of cultural change. The social sustainability of communities is often overlooked when developing policies for isolated regions, which dramatically transforms the physical, social, and cultural life of indigenous peoples. Discussions focus on “preservation versus modernization, commodification and commercialization”.

The multifaceted dimensions of culture and creativity, as factors contributing to smart, inclusive and sustainable development and acting as catalysts for innovation in the economy as a whole, have been recognised in various EU decisions and acts, such as the Communication on Cultural Heritage (EC, 2014) or the European Parliament Resolution on a coherent EU policy for the cultural and creative industries (EU, 2016). Once people meet their basic biological needs, which are significant base predictors of objective wellbeing in various cultures, meeting psychological needs as well as carrying out cultural and leisure activities can become an important source of subjective wellbeing (Iwasaki, 2007). Ensuring a “quality life” thus becomes a goal of social development. Culture seldom is considered the fourth dimension of sustainable development, along with environmental, economic, and social dimensions (Opoku, 2015) but also a strong driver of resilience (Panter-Brick, 2015).

An alternative theoretical framework is the needs theory, which postulates that meeting needs have beneficial effects on subjective wellbeing and quality of life (Diener & Lucas, 2000). If individuals can meet their needs (rest, entertainment, personal development), they will maintain or increase their wellbeing, health, and quality of life. At the same time, with the development of the Internet and the media, there is talk of a paradigm shift generated by the spread of consumer culture, of perishable culture. According to those who study the contemporary cultural phenomenon, the expansion of consumer culture determines the alteration of people’s value structure, negatively influencing human personality and critical thinking.

This section was an overview of the main selected papers and showed a multitude of perspectives and convergent/divergent paths. Nevertheless, a more conclusive analysis of systemic social, economic, and environmental needs through capability theory concerning the influence of place on the sustainability-resilience-wellbeing trinity is needed to provide a new perspective on the matter.

A different perspective and a possible solution to conceptual mismatches: the capabilities theories and place/territory-based approaches

Within the context of different convergences and divergences of the three-concept framework proposed and analysed in this study, there is a need for an overall well-established theory that can be used to apply it effectively. These fundamentals can be provided by the capabilities theory (if adjusted and interpreted through a sustainability-based perspective).

The capabilities theory of Amartya Sen had for a long time a great influence in the fields of social justice, human development, quality of life, as well as for designing policies (Robeyns, 2011). The theory is a reaction to egalitarianism, a largely embraced approach that is inattentive to human diversity (Sen, 1980).

Individual capabilities represent the effective freedoms of individuals to do and become things of value (Sen, 1999). It is not a sum of abilities but rather a combination of various functionings that a human being can achieve (Sen, 1993). They include basic but also more complex needs: food and shelter, mobility, health and education/knowledgeability, social interaction, a decent standard of living, subjective life satisfaction, security, etc. Nevertheless, it is difficult to have an always-systematic classification of capabilities, as they are sometimes extremely volatile and apply to individual contexts. Alternatively, as A. Sen argues in “Development as Freedom” (2004, pp. 14): “some capabilities are more difficult to measure than others and the attempts to do so can compromise their purposes” (2004, p. 14).

The maintenance of environmental resources and services is an essential precondition for human wellbeing. One can make the critique that A. Sen was inattentive to sustainability issues, and especially to the environmental pillar of sustainability (Crabtree, 2018). Moreover, environmental capabilities can reduce the impact of extreme events and increase the overall resilience of societies when tackling these events.

A broader social-ecological systems approach is beneficial when tackling disasters, to induce more resilience (i.e. the mitigation of and adaptation to these disturbances and even more sustainability; long-term balance development and wellbeing) (Liu et al., 2020). A more integrative/systemic framework of capabilities highly needed – environmental capabilities, but also overall, territorial capabilities – should be evaluated, as they are vital for a prosperous and sustainable society. In this regard, P. Nijkamp proposes the term resourceful region that describes the development possibilities and conditions (resources and capabilities) that should be optimised to provide the best economic and social performance (Nijkamp, 2016). Originating from the geographic possibilism of Paul Vidal de la Blache and being based on the general systems theory, the approach transfers the capability theory towards the environmental sustainability domain to take into account capability ceilings and functioning constraints (Peeters, Dirix & Sterckx, 2015).

Therefore, in a systemic view that perceives the environment as a whole that includes nature and society, one should consider both individual and societal capabilities, but also territorial/environmental capabilities (i.e. maintaining a resourceful and sound environment). To analyse capabilities from this viewpoint, an important element that integrates into the overall theory is the issue of conversion factors that are contextual characteristics – individual, social, economic, political-institutional or environmental – positively or negatively affecting individual capabilities and functionings (Sen, 1999; Hirani & Richter, 2017).

This well-established comprehensive theoretical construct is highly relevant in the context of place-based governance and place-based social-ecological sustainability research. Place-based are by design bottom-up approaches used to meet the specific needs of people in a given location by working together with the main stakeholders to use the best available resources and local knowledge. This perspective is useful as it helps build an image of the territorial system from a local perspective. It also sustains, enforces, and seeks to improve local strengths and capabilities – social capital, community resilience and cohesion to reduce disparities (Balvanera et al., 2017).

CONCLUSIONS

The present study is a general exploratory bibliometric and theoretical insight of an emerging highly important framework unifying three of the most increasingly popular concepts in scientific research, political and administrative documents, and public discourse.

The main question (that remains open to some extent) is: can these three concepts give birth to a new paradigm in planning and development? Or are they just redundant and sometimes contradictory terms that, by their mixture, can make even more difficult the strategic planning and decision-making processes.

The results show the prevalence of four major directions of research that include the three concepts as pillars for the theoretical and empirical approaches: 1) nature-centred assessments, 2) safe and sustainable human activities and critical services, 3) participative governance for planning human settlements; 4) individuals' and communities' culture and identities. While analysing the main themes and topics influenced or shaped recently by this "new trinity", we discovered the convergences, but also the mismatches while trying, in the end, to find a unifying well-known theory that could be adapted to respond to the necessities of this new integrated vision.

Only a cross-scale holistic approach to resilience and prosperity can help to achieve and sustain the wellbeing of individuals and the soundness of the environment in these challenging times of risk society. Effective place-based approaches based on community participation can tackle the local issues (vulnerabilities, dysfunctionalities, injustices) and can be scaled-up or diffused, as good practices, to other areas. Capabilities theory can be the missing link and provide the necessary background to unify the three concepts that could change the present paradigm of governance. To accomplish this role, the classic theory had to be adapted towards a broader sustainability-related perspective that will take into consideration the equity and wellbeing of individuals and communities, but also the equilibrium between nature, culture, and human development.

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