Integrated Planning as a Mechanism for Creating Sustainable and Resilient Settlements

Brankica Milojević[1]

1 Faculty for Architecture, Civil Engineering and Geodesy, University of Banja Luka, Bosnia and Herzegovina, bmilojevic@agfbl.org

ABSTRACT **Urban development today is a process that is directed towards sustainable and resilient settlements. That goal cannot be reached without integrated planning. Many problems faced by urban areas seeking to do so are the result of, among other things, underdeveloped practices of integrated planning, particularly in the post-socialist countries of Europe. Starting from this hypothesis, the first part of this work deals with the theory of integrated planning as a planning approach that has evolved from the mid-twentieth century until today, specifically its indissoluble connection with the complex character of urban space and a sustainable and resilient environment. The second part deals with the methodology of integrated planning based on a problem-oriented analysis of the environment, society, the economy, and the urban planning institutional potential, from the perspective of collaboration and participation. Research has shown that the implementation of integrated planning is directly connected to the socio-economic conditions, legal frameworks, technology, and professional and educational potentials of urban areas, which differ for each country. It is important to make efforts at municipality level to implement projects that promote integrated approaches to planning sustainable and resilient environments, which can be a stimulus for the improvement of legislation and socio-economic conditions at a higher level of government, and a development of good practice in other cities. Research has shown, through concrete examples, that the practice of integrated planning is more prevalent in cities in EU countries than in post-socialist countries. This article focuses on the case study of the Republic of Srpska, where there are many problems in its implementation. Based on the analysis of this case study, it can be seen that it is necessary to constantly work on improving the methodology of integrated planning, education, and the training of planners and stakeholders, as well as strengthening the institutional and socio-economic preconditions for its implementation, particularly in post-socialist countries.**

KEYWORDS integrated planning, urban space, sustainable development, sustainability, resilient settlements

1 Introduction

Integrated planning is one of the basic approaches to modern planning and is, due to the complex character of spatial phenomena, a logical and necessary one. The term 'integrated' is widespread today and describes all phenomena of sustainable development and management. Sustainable development nowadays is based on the balanced development of society, economy, and environment, while considering spatial and contemporary relations (Albrechts, 2004; ECTP-CEU, 2013). It also integrates spatial-physical and social forms of development of urban space. Policy-making for sustainable urban development and the creation of institutional frameworks at all levels has acknowledged integrated planning as the mechanism for achieving a sustainable and resilient urban space and environment. For this reason, a further relationship can be proposed: sustainable development includes sustainable urban development through integrated planning. According to Geerlings and Stead (2003), the creation of integrated policies is complex and depends on numerous factors, such as organisational, individual, political, economic, financial, contextual, process-like, etc. Resilience is a crucial prerequisite for achieving sustainability and sustainable development (Folke et al., 2002); it is a component, a "subset of the broader concept of sustainability science" (Folke, 2016, p. 5); a resilient socio-ecological system is "ecologically, economically, and socially sustainable" (Holling & Walker, 2003, p. 1).

Integrated planning is, in theory, based on the evaluation and improvement of the rational planning of the 1950s (Abukhater, 2009; Lawrence, 2000), and is a result of the complex nature of the urban context and the overall development of socio-economic relations, which have, in the last decades, become very dynamic (Pickett, Cadenasso, & Grove, 2004; Ray, 2012). The degree of development nowadays in the fields of economy, social culture, and technology, and the historical flow of these processes, show the permanent complexity and interactive effect of influential factors on urban space and environment (Milojević, 2015). The enormous transformations of our cities, societies, and environment over the past few decades call for a more effective and resilient planning and development perspective (Pickett et al., 2004). The integrated planning of resilient urban environments has been developed to address the negative impacts of climate change, rapid urbanisation, and the modern style of life (Pickett et al., 2004; Zahao, 2010). It is based on the trans-disciplinary nature of cities and problems that require interdisciplinary collaboration (Abukhater, 2009), which is not easily achievable.

Besides horizontal inter-sectoral integration in planning, there is also vertical integration related to planning at various spatial and governance levels (Geerlings & Stead, 2003). As some urban phenomena do not have clear spatial boundaries, it is necessary to analyse them through all spatial scales, from the local to the regional, national, and international levels, including the time dimension, which activates short- and long-term aspects of problems and their planning solutions (Abukhater, 2009). Planning should be comprehensive in terms of including complex

and dynamic development aspects. It should improve mechanisms for socially responsible, adaptable, and participative planning, with the aim of having sustainable and resilient planning of urban space and environment. Planning should also have a human aspect by improving the quality of citizens' life through the protection of nature, created values, and optimal conditions for present and future generations.

Integrated planning also includes defining the appropriate methodology of the planning process, the involvement of stakeholders and the public in the planning process, and urban management, which require additional knowledge and skills. The creation of appropriate regulations and policies in the field of socio-economic and ecological conditions, such as system organisation at the international, national, and local levels, are preconditions for the realisation of integrated planning in practice.

The sustainable development of cities is considered at all levels of governance in creation of strategy documents for sustainable urban planning. UN-Habitat, in *The World Cities Report* (2016b), an analysis of the last twenty years, shows with compelling evidence that there are new forms of collaboration and cooperation, planning, governance, finance, and learning that can sustain positive change in many cities in the world but also demonstrates that the current urbanisation model is unsustainable in many respects, puts many people at risk, creates unnecessary costs, negatively affects the environment, and is intrinsically unfair (Ban Ki-moon, 2016, *Foreword* of *The World Cities Report*). *UN-Habitat III - New Urban Agenda* (UN-Habitat, 2016a), defines a common vision for settlements, principles of and commitments to environmentally sustainable and resilient urban development.

The Urban Agenda for the EU 'Pact of Amsterdam' (EC, 2016) is a coherent set of actions for key European actors (member states, regions, representatives of urban authorities, the European Commission, the European Parliament, the Union's advisory bodies - Committee of the Regions, European Economic and Social Committee, the European Investment Bank and other relevant actors) who work in partnership. It strives to involve urban authorities responsible for all levels of governance in achieving better regulation, better funding, and better knowledge for smart, sustainable, and inclusive urban growth. Among the priority themes are strategic urban planning with balanced space development and an integrated and participatory approach.

Twelve thematic priorities have been agreed for an EU urban agenda and feature in the *Pact of Amsterdam* (EC, 2016): jobs and skills in the local economy; urban poverty; housing; inclusion of migrants and refugees; sustainable land use; circular economy; climate adaptation; energy transition; urban mobility; air quality; digital transition; and innovative and responsible public procurement.

The EU supports the creation of a network of European cities under the common theme of sustainable urban development. As reported in *New Planning Culture in German Cities* (Schaber, Wékel & Zdiara, 2016), many successful initiatives in this domain have already been realised.

The renewal of urban space in German cities is the result of the new planning approach, proclaims the German Association of Cities (2013).

Apart from the creative sustainable development of cities, it is clear that the more important goals have not yet been achieved, such as equality, security in many places, protection from climate change and so on (Ban, 2016; Doughty & Hammond, 2004; Kenworthy, 2006; Moore, 2007). One of the reasons for this is the lack of integrated planning, especially in transitional countries (Kosareva & Puzanov, 2012; Vujošević & Spasić, 2007). The importance of this theme immediately shows the need for theory and practice research to systematically improve planning methodology, regulations, institutional capacities, social economy, and education for the implementation of integrated planning.

This paper explains the concept of integrated planning and its theory and practice in the EU, with a special focus on planning practice in the Western Balkans (Case Study of the Republic of Srpska).

2 Development of an Integrated Approach to Planning

Theories of integrated planning are based on the integrated nature of the planning process and urban phenomena. Urban planning can be described as a technical and socio-political process concerned with the welfare of people, control of the use of land, design of the urban environment, and the protection and enhancement of the natural environment. It is a multidisciplinary process that includes professionals from various fields in common planning activities. For a long time, they worked separately, and cities suffered from many chronic urban problems related to social justice, unemployment, traffic congestion, and environmental pollution. That these problems perpetually extend shows "the importance of across-space-and-time planning approaches that account for short and long-term consequences and multiple levels of impacts of city and metropolitan-scale problems, including local, regional and national levels" (Abukhater, 2009, p. 67).

Apart from improving the planning process, the comprehensive approach did not follow societal processes, and its aims went beyond human intellectual capabilities and technical and organisational capacity (Lindblom, 1959) in the 1960s. The relationship between social processes and planning, a crucial precondition for responsible and sustainable planning, has not been installed for a long time. Knowledge gained over recent decades of socio-economic development, environmental challenges (such as uncontrolled degradation of natural resources and climate change), and rapid technological progress in information accumulation and management should be passed on with the aim of supporting sustainable development with an integrated development approach.

Awareness of the necessity for global protection of the environment, social equity, poverty reduction, and the right to health and education

has resulted in the idea of sustainable development that provides a path to desirable and appropriate outcomes. These ideas have been developing at international conferences for more than four decades (see, for example: the *United Nations Conference on the Human Environment*, Stockholm, 1972; *Habitat I and II - Conference on Human Settlements*, Vancouver, 1976 and Istanbul, 1996; the *United Nations Conference on Environment and Development*, Rio de Janeiro, 1992; the *World Summit on Sustainable Development* or *ONG Earth Summit 2002*, Johannesburg, 2002; *Rio+10*, 2002 and *Rio+20*, 2012). Activities related to urban planning and housing are coordinated by UN-Habitat, which produces studies and publications on all types of human settlements with the aim of protecting the environment and ensuring a better quality of life for the present and future generations (*Cities and Climate Changes*, 2011a; *Affordable Land and Housing in Europe and North America*, 2011b; *Planning and Design for Sustainable Urban Mobility*, 2013; *New Urban Agenda*, 2016a; etc.) An integral part of this idea is the creation of a sustainable and resilient urban environment. *How to make cities more resilient - A Handbook for Local Government Leaders* (UNISDR, 2012) gives ten essentials for making cities disaster-resilient: (1) institutional and administrative framework; (2) financing and resources; (3) multi-hazard risk assessment; (4) infrastructure protection, upgrading, and resilience; (5) protect vital facilities: education and health; (6) building regulations and land-use planning; (7) training, education and public awareness; (8) environmental protection and strengthening of ecosystems; (9) effective preparedness, early warning, and response; and (10) recovery and rebuilding communities.

Climate change, economic recession, and refugee crises, which have affected the whole planet, emphasise the actuality of sustainable development and the necessity to permanently search for models for planning a sustainable and resilient environment. At the heart of this approach is integrated planning.

The global consideration of these issues through the institutions of the United Nations represents the highest level of integrated approach to development issues, which has both spatial and planning implications. *The New Urban Agenda* (UN-Habitat, 2016a) promotes integrated planning that aims to balance short-term needs with the long-term desired outcomes of a competitive economy, high quality of life and sustainable environment. *The Agenda* defines many other aspects of planning and management of urban and spatial development such as balanced territorial development policies and plans, high quality of buildings and public space, promoting integrated and participatory approaches in planning process, multiple use of space, etc. The *Urban Agenda for the EU* (EC, 2016) is based on the principles of *The New Urban Agenda* and contributes to the implementation of *The 2030 Agenda for Sustainable Development,* notably goal 11 – "Make cities and human settlements inclusive, safe, resilient and sustainable" (UN, 2015, p. 14). Apart from the need to coordinate with the UN documents, the results of the social, economic, and ecological connectivity of European space are integrated development policies, which EU bodies adopt for all their members. From this emerged the idea of the spatial integration

of European cities (ECTP-CEU, 2013), which plays a key role in pursuing the *Europe 2020* objectives (EC, 2010).

The above UN and EU documents are significant political, institutional, and organisational guidelines for the implementation of an integrated approach to planning and managing urban development.

3 The Relationship Between Integrated Planning and a Sustainable and Resilient Environment

The objective of sustainable development is creating and *maintaining* prosperous social, economic, and ecological systems (Folke et al., 2002; Albrechts, 2004) that are adaptive and able to flourish and grow in the face of uncertainty and constant change. Achieving sustainability requires innovation, foresight, and effective partnerships among corporations, governments, and other groups. While it is not possible to tell the future, governments and other agencies can equip themselves to adapt to the turbulence ahead. The complex nature of urban space shifted to the idea of resilient environments in the 1970s in the field of ecology through the research of Holling, who defined resilience as "a measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables" (1973, p. 14). Humanity has a strong *need for persistence* and depends on services of ecosystems for its wealth and security. That's why humanity and ecosystems are deeply linked. As a result, it is imperative that humanity strives for resilient socio-ecological systems through sustainable development (Pisano, 2012).

Other theories define resilience as "the ability of a system to absorb disturbances and still retain its basic function and structure" (Walker & Salt, 2006, p. 1); as "the capacity of a social-ecological system to continually change and adapt yet remain within critical thresholds" (Folke et al., 2010, p. 1); or the "capacity of a system to survive, adapt, and grow in the face of unforeseen changes, even catastrophic incidents" (Center for Resilience at the Ohajo State University, n.d. para. 1). Thus, the resilience of the built environment may be the key to global sustainability.

Space is a physical framework for all development processes. It is possible to draw several relationships from this definition, such as the fact that processes in space are the result of natural and created influences; natural influences can be taken as priority processes and human activities must be harmonised with them; and there is a mutual impact and integration of natural and created influences that form the urban environment. They all act in space and time, which results in continuous transformations and dynamics of urban context that have been especially emphasised in the last development period (ISOCARP, 2012).

This period is also characterised as a time of immense challenges to sustainable development (UN, 2015). UN efforts from the 1970s

up to now (Habitat I, 1976; Habitat II, 1996; Istanbul +5, 2001; Habitat III, 2016), to create institutional, social, economic, knowledge, and financial networks for sustainable development, have played a major role in pointing global development in the right direction. Sustainable urban development and management are recognised as crucial to the quality of life of the world's population, which is why one of the seventeen sustainable development goals of the UN is to make cities and human settlements inclusive, safe, resilient, and sustainable by 2030. This means to "enhance inclusive and sustainable urbanisation and capacity for participatory, integrated and sustainable human settlement planning and management in all countries" (UN, 2015, p. 26). Spatial planning must embrace all the processes happening in society, economy, and environment (Abukhater, 2009). Natural and created processes and their interactions are complex and require integrated planning and management of all developing processes, including the creation of sustainable and resilient urban environments (Pickett et al., 2004; Yigitcanlar & Teriman, 2014).

Among the different spatial aspects (environment, building structures, spatial functions, social activities, economy, politics, people, culture, institutional framework, etc.), there are mutual influences and regulations accepted by integrated planning (Abukhater, 2009; Yigitcanlar & Teriman, 2014). It is important to analyse all of them, particularly the environment and its natural processes, with the aim of planning for the mitigation of the causes of climate change and preservation of ecosystems.

Based on an analysis and assessment of overall contextual situations regarding the space and the adopted policies at the local and global level, there should be a responsible planning approach to create spatial conditions that will correspond to the current and future needs of people. In accordance with the UN *2030 Agenda for Sustainable Development* (2015), which provides integrated, indivisible, and balanced assessments of the three dimensions of sustainable development – the economic, social, and environmental – the UN-Habitat *International Guidelines on Urban and Territorial Planning* (2015, p. 14-21) defines the main principles for planning in those domains. These are: "adequate standards of living and working conditions for all; an equitable, better quality of life; cultural heritages and cultural diversity; a framework for new economic opportunities; better connectivity at all territorial levels; a spatial framework to protect and manage the natural and built environment; human security; and environmental and socioeconomic resilience, enhancing the mitigation of, and adaptation to, climate change".

At the same time, integrated planning, as a good practice, should be proactive and offer new development potentials and guidelines for future development, like, for instance, that which is present in German cities (Schaber et al., 2016).

4 The Methodology of Integrated Planning Process

The transition from traditional land-use planning to strategic planning was crucial for the development of the methodology of the integrated planning process. Strategic planning is about process, institutional design, and guidelines for integrated development. Land-use plans, with their 'physical' solutions to social problems, became strategic plans with short-term actions and the framing activities of stakeholders to help achieve shared concerns about spatial changes (Albrecht, 2004). Albrecht (2004) defined such a planning concept as a four-track approach with the tentative integration of different types of rationality: value rationality (the design of alternative futures); communicative rationality (involving a growing number of actors in the process); instrumental rationality (looking for the best way to solve problems and achieve the desired future); and strategic rationality (a clear and explicit strategy for dealing with power relationships).

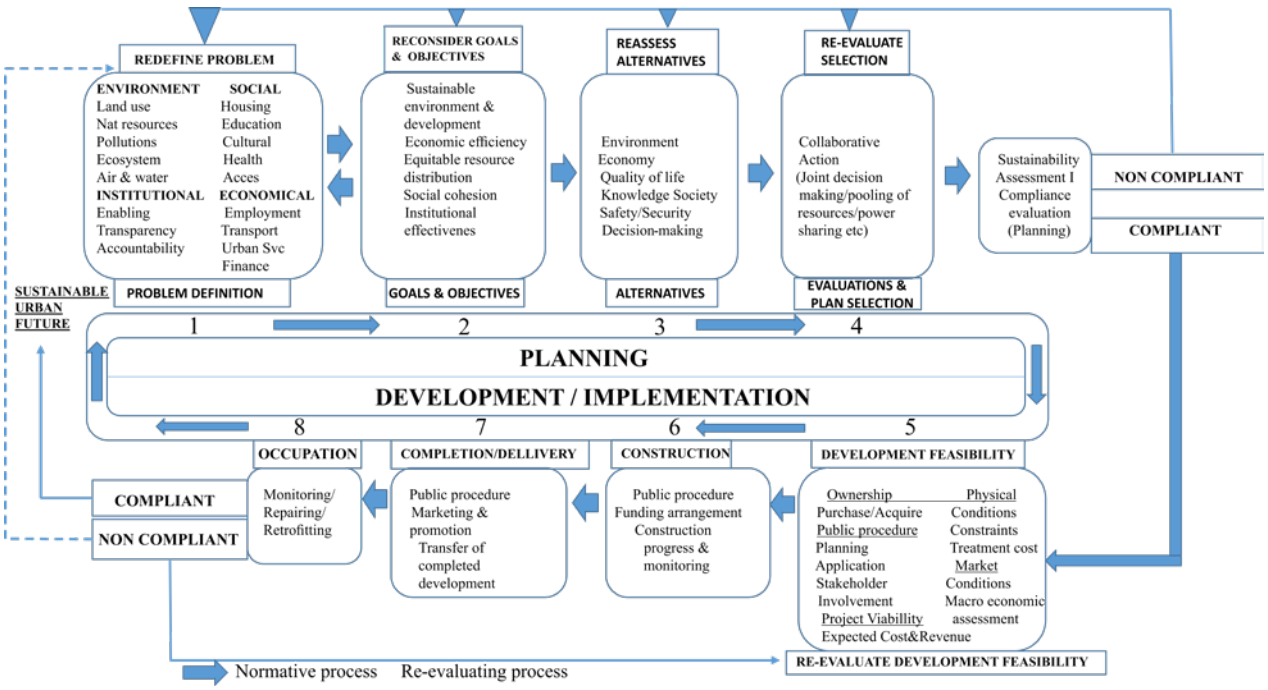

FIG. 4.1 Proposed integrated urban planning and development process *(Yigitcanlar & Teriman, 2014)*

Adopting a system approach involves the integration of the three key components – planning, development, and ecosystem sustainability – into a single urban planning and development process to create a sustainability-oriented urban planning and development culture. (Yigitcanlar & Teriman, 2014, p. 346). The role of planners in this approach changes from one of merely providing expert opinion and technical leadership to mediating between and communicating with stakeholders (Yigitcanlar & Teriman, 2014). Teriman (2012) defined eight steps in the integrated planning approach: (1) redefine the problems in the domains of environment, society, economy, and institutions; (2) reconsider goals and objectives; (3) reassess alternatives; (4) re-evaluate selection; (5)

development feasibility; (6) construction; (7) completion/delivery; and (8) occupation (Fig. 4.1). This model offers sustainability assessment, which takes place after (4) and (8), as a very important mechanism for controlling the planning process. From that point, activities could be back to step (1) redefine the problem.

There are numerous sustainable urban development assessment methodologies that measure different sustainability dimensions of the built and natural environments such as land use, transport model, urban infrastructure, urban-ecosystem, etc., which support integrated urban planning and development processes.

A multidisciplinary analysis of all relevant environmental factors that influence planning – such as geomorphology, geology, seismology, natural resources, renewable energy resources, vegetation, climate, and climate change – as well as factors generated by human activities (such as construction, urban facilities, residential housing, education, cultural/health access, and the economy) is crucial for a comprehensive and integrated planning approach. Given the complexity of urban space in the domains of environment, society, economy, and institutional framework, such an analysis has the potential to redefine the problems, goals, and objectives of planning.

There is a necessary interaction among the basic planning steps that needs to be achieved in the process of integrated planning and management of the sustainable development and resilient urban space and environment. The whole planning process presents cycles in which the steps and activities influence each other.

It is also necessary to ensure the participation of all stakeholders in the development and implementation of the plan. Strengthening participation through the involvement of citizens in the planning and decision-making process is an important prerequisite to a comprehensive review of the problems and needs of the population, especially at the local level.

Integrated planning involves the flexibility achieved by using zoning and abandoning strict regulatory planning (Counsell, Allmendinger, Haughton, & Vigar, 2006). Zoning is the recommended model of regulation for the wider urban territories and areas with a lower construction index. It offers flexibility in defining building roles, parcels of land, and permitted, conditionally permitted, and prohibited land use. Thus, a dynamic social, economic, and environmental urban context (Kosareva & Puzanov, 2012; Ray, 2012) can be more easily accepted in the planning process. Zoning began much earlier in American cities and Western Europe while strict regulatory planning was common in former socialist countries. While zoning in American cities is a matter of an administrative document, in the European continent it still requires a regulatory document prepared by urbanism professionals. The zoning model is still being developed in former socialist countries and needs to be adapted to the specifics of their society, economy, history, law, land regulation, and urban development through history. Such a zoning

model was developed through pilot projects in some municipalities in Bosnia and Herzegovina (B&H) between 2010 and 2011 and then passed into law. It should also be noted that strict regulatory planning has been, and still is, applied in relation to some aspects of planning in many countries (e.g. in conservation areas, areas with a high index of construction) and might continue to be used if considered necessary in some urban areas.

The end of the 20th and the beginning of the 21st centuries are characterised by a strong, intensifying link between society and technology. The information network called 'smart city' is used to detect changes, analyse them, and, consequently, improve the efficiency, safety, and sustainability of urban spaces and processes (Stupar & Mrdjenović, 2015). Information technology is considered a powerful instrument for achieving integrated planning and development.

To plan a sustainable and resilient urban space, it is important to create a spatial information system with all the relevant data that will allow a comprehensive understanding of the phenomenon of urban space and natural environment. GIS technology has been adopted as a tool for the creation of a database for sustainable planning and management of different spatial categories and resources (Rotondo & Selicato, 2014).

The database that records climate changes and their effect on urban space and the environment is especially important for the implementation of integrated planning, as well as for measures to protect sustainable and resilient urban space and the environment from harmful effects (Milojević, 2016). Protection against floods in the context of climate change implies making development decisions on the basis of current and potential future risks of extreme hydrometeorological events (Gencer, Stephens, & Johanson, 2015). Therefore, some countries in the EU, like the Netherlands, create maps of risk and flood hazards, wind, and other extreme climatic conditions to support planning for resilience.

Improving energy efficiency for all planned buildings has already become a legal requirement in all EU countries, in accordance with EU directives no. 2002/91/EC and 2010/31/EU. The regulative frameworks in accession states such as Serbia and B&H are in compliance, while strategies to improve the energy efficiency of the existing building stock have been adopted under the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) support. The publication *Typology of Residential Buildings in Bosnia and Herzegovina* (Aksić at al., 2016) is the result of research collaboration between the universities of Sarajevo, Banja Luka, and Belgrade, the priority being to find a way to reduce energy consumption in both new and existing residential buildings.

In addition to creating a spatial information system, it is necessary to continuously update the database on natural processes, disasters caused by climate processes, and anthropogenic activities (soil erosion, landslides, desertification, deforestation, etc.), and processes that are the result of human activities and planning processes (land use,

construction, housing, transport, water supply, solid waste, energy and technology resources, education, culture, health, protection of cultural heritage, etc.). Evidence of planning documents and the transition dates of all elements of planning regulation, from the present to a planned state, also represent a part of the planning process and require continuous updating. Using GIS in planning and collecting spatial data and the education of staff in new approaches to planning and urban management are also necessary for an integrated planning process.

Institutional support and regulation frameworks, which are also included in integrated planning processes, are preconditions for sustainable development. That's why the integrated planning approach is more developed and implemented in the EU than in the Balkan region. Implementation of integrated planning is based on planning methodology, recognised more through theory and less through planning practice. Despite good urban practice in some countries (Germany, Spain, Italy, Netherlands, France, etc.), it is evident that many theoretical assumptions in integrated urban planning have not been achieved in real-world practice (Ban, 2016), which has been the case in former socialist countries since the 1990s. Figure 4.2. presents a proposed planning methodology in Republic of Srpska in accordance with the law for spatial planning, which consists of the main elements of integrated planning, but which is not yet implemented in planning practice.

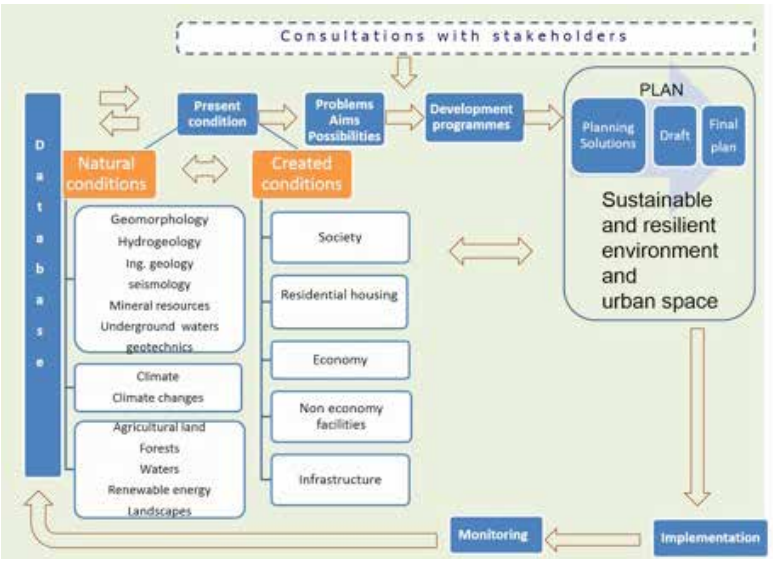

FIG. 4.2 A proposed methodology for integrated planning in Republic of Srpska in accordance with the law for spatial planning and construction *(Image by Author, 2015)*

As cities are key actors in development, integrated urban development planning is the new informal planning approach. It is a target–oriented and implementation-oriented strategic control instrument. Committed to serving public interest, equal opportunities, and gender mainstreaming, integrated urban development planning is based on the diversity of local conditions that proclaim the planning process without uniform standards. The content and methods are determined by local challenges and planning practice, supplemented by urban development management. Integrated urban development planning

is actually the process that results in integrated urban development strategies that often form the umbrella brand of different modules. This planning approach, adopted by the German Association of Cities (2013) has already been used in many German cities (Schaber et al., 2016). One of the principal cross-cutting topics of strategic significance is the international outlook and cooperation between European cities.

5 The Influence of Socio-Economic Policies on Integrated Planning

The complexity of urban space points to the necessity of adopting numerous strategies and development policies for managing natural resources, environment, and public utilities (health, education, culture, sport, communal activities, economy, social protection of vulnerable groups, etc.), which is the basis for planning sustainable and resilient built environments. The strategies and policies adopted by governments should be synchronised through the various sectors and spatial levels. These activities require strengthening of the organisational structure, which must connect the local (municipality) level with higher levels of government (regional and state). In some European countries, there are two regional levels – in France, there are regions and departments, in Italy regions and provinces, and in Germany there are districts. The planning system is directly connected with the political and administrative division of the territory. Responsibility for spatial and urban development, land policies, and housing is different in many European countries. In general, the process of decentralisation started in the 1970s, when the regional governments had a high degree of autonomy in this field within the state's legal framework. Accordingly, the municipalities have jurisdiction over the development of their territories, including urban planning. In many countries, national associations of cities are formed to represent the cities and municipalities at state level (Austria, Germany, Netherland, Denmark, Sweden, Finland, etc.). The cities and municipalities can ask for the support of the association in solving some problems of urban development, defining projects for application for loans, collaborating with other cities, etc. There are also supranational and transboundary systems at the highest levels of governments for multinational regional strategies, which "could help direct investment to address global issues such as climate change and energy efficiency to enable the integrated expansion of urban areas in cross-border regions, mitigate natural risks and improve the sustainable management of shared natural resources" (UN-Habitat, 2015 p. 2).

Policies for sustainable and resilient development and the responsible management of these processes are the most complex challenges for society today. There are huge obstacles standing in the way of achieving this, especially in the post-socialist and underdeveloped countries, which directly affect the implementation of integrated planning. They are related to the lack and incompatibility of relevant strategies, policies, and laws. *Energy Strategy of Republic of Srpska* up to *2030* (Government of the Republic of Srpska, 2012) was not harmonised with

the law for spatial planning and construction (NSRS, 2010) that was adopted in the same year. The updated law (NSRS, 2013) accepted the energy strategy and EU directives in the domain of energy efficiency. The implementation of this strategy now depends, among other factors, on the professional capacity to define standards for designing, constructing, and using energy-efficient buildings and the education of all actors in this domain. The economic decline and lack of governance capacity at national and municipality levels in post-socialist countries limits their capabilities to create and implement relevant policies of sustainable and resilient development, which directly cause problems with the implementation of integrated planning.

The planning system in each country is determined by its political system and legislation. The legislation on spatial planning and development created by the responsible ministries is usually adopted by a parliament in each state. The relevant ministry in Republic of Srpska is the Ministry of Spatial Planning, Civil Engineering and Ecology; in the Federation of B&H, it is the Ministry of Spatial Planning; in Serbia it is Ministry of Construction, Transport and Infrastructure; and in Croatia, the Ministry of Civil Engineering and Spatial Planning. Regions and municipalities are obliged to respect them and synchronise the lower levels of the spatial regulatory system accordingly. The states define spatial development strategies, policies, programmes or spatial plans, and regional and municipality plans should be harmonised with them. In many countries, such as Italy, Germany, Belgium, Denmark, Norway, and Sweden, the regional level of government is responsible for urban planning, land use, building, issuing permits for buildings, licences, and urban standards.

In the Republic of Srpska, there are entity and municipality levels of governments. The entity adopts the law for spatial planning and construction (NSRS, 2013) and the *Amendments to the Spatial Plan of Republic of Srpska by 2025* (Ministry of Spatial Planning, Civil Engineering and Ecology of Republic of Srpska, 2015) as umbrella planning documents. The municipalities adopt the spatial plans for the territories of the municipalities and urban plans for cities. At the Federation of B&H, there are state, regional (cantonal), and municipality levels of planning responsibility. Each of the 10 cantons adopts a law for spatial planning, which is synchronised with the entity one. The creation of proper legislation plays an important role in providing all the necessary preconditions for integrated planning. Planning legislation in B&H defines the following: multi-disciplinary aspects of the planning process (requirements for licensing the professionals and institutions, character and importance of spatial planning), procedures, responsibilities, actors, the basic planning methodology, etc. Public participation needs to be defined by the law in a proper way, just like the integrity of the planning process. The law should define the context of the planning documentation, planning steps and the responsibilities of government and institutions at the state, regional, and municipality levels, and planners and other actors for their preparation, design, adoption, implementation, and monitoring. It is necessary to define

planning methodology as a particular guideline for the practice of integrated planning.

Education is very important to ensure skilled planning experts for responsible and competent participation in the process of integrated planning and management of spatial development. Urban development units need varied staff with interdisciplinary qualifications and professional experience for effective integrated urban management. The necessity of strengthening the capacity of development units for more efficient and collaborative urban management is recognised as the task to be completed in post-socialist cities. This is why planning professionals and their institutions and municipal departments for urban planning should collaborate with institutions of learning and training (faculties or institutes for urban planning) to increase their capacity for integrated urban planning. Educational institutions should also make the effort to review and develop university and professional curricula on urban and territorial planning. UN-Habitat (2015) recommends using the *International Guidelines* to achieve this.

Some university master courses, in contrast to traditional learning, contribute to the development of integrated and strategic planning. They provide teaching processes based on the real problems of planning practice at local/community level and create solutions through dialogue with a broad network of participants.

Processes in space and society over the last few decades, as well as advances in information technology, show the necessity of adapting spatial planning to these processes. This requires the ongoing education not only of experts and students, but everybody involved in the planning process and management of spatial development.

Changes in socio-political relations at the global level change the global demographic picture. The refugee crisis is a new challenge for Europe, as well as for other countries. We can search for a response to critical situations through sustainable and resilient policies of social and economic development at the national and global levels. In 2015, many refugees, mainly Syrians, started moving to West European countries to escape war and poverty. The reaction of the countries on their migration route (Turkey, Greece, Former Yugoslav Republic of Macedonia, Serbia, Hungary, Croatia, Slovenia, Austria, Germany, France, and the UK) varied. At first, they worked together to allow the refugees to move onwards to the country they wish to reach. When the process threatened to spiral out of control, some countries (Hungary, Croatia, Slovenia) closed their borders. This showed the difference in human rights policies among the countries in the EU.

Besides creating system preconditions under the jurisdiction of the state, there are also preconditions that need to be adopted at the municipality level to consider integrated planning. They include municipal policies related to local urban regulations, the creation of private-public partnerships, strengthening of participation and cooperation with stakeholders, adoption of local development strategies, and the

responsible management of the processes of preparing, adopting, and implementing plans.

Due to the complexity of managing policies of socio-economic development, which are rarely defined or harmonised, the implementation of integrated planning is hard. The question is whether the integrated socio-economic policies are also preconditions for integrated planning, or whether integrated planning can improve integration policies in different fields (Counsell et al., 2006; Acheampong & Ibrahim, 2016).

It is certain that integrated planning, due to its character, is a mechanism for developing a more sustainable and resilient environment, as is evidenced in some German cities. Although it depends on general socio-economic conditions, it can play an active role in improving the integration of different policies through the spatial dimension that connects them.

6 Integrated Planning of European Space in Theory and Practice

It is clear that there are different approaches to integrated planning in Europe. They are established through the consideration of the theories of planning (Abukhater, 2009; Albrecht, 2004; Berke et al., 2006; Folke, 2016; Geerlings & Stead, 2003; Holling, 1973; Jabareen, 2013; Kosareva & Puzanov, 2012; Picket et al., 2004; Teriman 2012; Yigitcanlar & Teriman, 2014; and others) and the recommendations of UN-Habitat (2015; 2016a) and EU bodies (EC, 2016), which coordinate many processes by defining integrated development policies, including urban development. The models of integrated planning are also connected with the tradition and practice of each country (Kosareva & Puzanov, 2012). They are the result of specific spatial and urban development at the national level, administrative divisions, regulatory frameworks, planning systems, economic development, organisational and institutional support, and education.

At the municipality level, models of integrated planning are limited by the capacity of the local community to manage urban development in a competent, sustainable, and responsible way, the education process, collaboration with stakeholders, and public participation. In some EU cities, these limits have been overcome to initiate integrated urban development planning as an informal instrument that broadens the system of official planning (German Association of Cities, 2013).

Finally, the integrated approach to planning also depends on planners' skills at managing the planning process, accepting the global achievements in planning theory and practice, and developing their own methodological approaches.

6.1 Integrated Planning in the EU

The establishment of the EU in 1992 had a significant influence on general planning guidelines in Europe. The *Treaty on European Union* (Council & Commission of the European Communities, 1992) defined the main objectives of the Contracting Parties (Union) as: to promote economic and social progress that is balanced and sustainable; to assert its identity on the international scene; to strengthen the protection of the rights and interest of the nationals of its Member States and to develop close cooperation on justice and home affairs. Integration politics included urban development and integrated planning (EC, 1997), which were followed by the development of theories and approaches in practice in certain EU countries.

Albrechts (2004) states that according to the European Commission (1997), more open and flexible EU planning systems were recommended. It was also suggested that land use should not be defined precisely, so it could develop alongside rapid changes in social and economic conditions.

"All the EU member states, except the United Kingdom and the Republic of Ireland, use detailed planning instruments which play a determining role in guiding the location of development and physical infrastructure, and the form and size of development tasks" (Albrechts, 2004, p. 744). Traditional planning of land use is being replaced with the flexible zoning system, and 'consensus building'. Cooperation and an open dialogue with all actors are advised. Counsell et al. (2006) think that the planning system is becoming a mechanism for improving integration policies – horizontal, sector-like, and vertical among political and management levels. They conducted research on the degree of integration of various spatial planning policies in England, Northern Ireland, Scotland, and Wales in 2005.

It has been noted that in these countries, the policies connected with housing, economic development, transportation, sustainable development, biodiversity, and storage of solid waste were highly integrated with spatial planning but not social policies. Education and skills are the least integrated with spatial planning, which opens a wide field of action, including education on integrated planning.

Wider research of spatial documentation at the local and regional levels for the Berlagen area in Sweden (Elbakidze et al., 2014) showed that the stakeholders were not properly involved in the planning process, and there is room for improvement of integrated planning.

The Association of German Cities promotes a 'new planning culture in German cities' in accordance with 'integrated urban development planning and urban development management'. With the support of the association, 55 projects were realised in 35 German cities – examples of best practice in individual cases where cities have set qualitative standards for their planning goals and their own planning procedures (Schaber et al., 2016). The renovation and redesign of public urban spaces for a dynamic urban society, with a variety of functional

requirements, were realised in Augsburg, Bielefeld, Hamburg, Hanover, and Leipzig. Adjustment of traffic space to a change in mobility patterns, using energy-saving and low emission mobility, was realised through the projects in Augsburg, Dortmund, Freiburg, Kassel and Munich (Munzinger, 2016). New urban quarters were realised in Bremen, Essen, Heilbronn, Munster, Dortmund, Frankfurt am Main, Cologne, Leipzig, Munich, Regensburg, Stuttgart, and Wiesbaden. They promote integrated sectoral urban development concepts for housing, participation, new concepts of funding, etc. (Schaber, 2016). Projects that ensured the quality of urban design, preservation, and reconstruction of urban space were realised in Biberach, Dortmund, Mainz, Munich, Dresden, Halle, Potsdam, Saarbrucken, Siegen, and Wolfsburg (Wekel, 2016). A process-oriented approach and strategic urban development planning were realised in Bremen, Heidelberg, Berlin, Erfurt, Frankfurt am Main, Freiburg, Hamburg, Karlsruhe, Munich, and Schwerin. It is evident that the integrated urban concepts of towns (like the Berlin Urban Development Concept 2030) are based on the old plans, new cross-department strategies and concepts, workshops with key actors, city forums for the public, and events for special target groups (Schmidt, 2016). Guaranteeing civil participation in urban development processes is present in most German cities (Zdiara, 2016).

Six EU countries (Germany, Italy, France, Holland, England and Spain) started creating Smart Cities and Communities in the EU (EC, 2016) based on topics such as energy efficiency, sustainable energy networks, and transportation. Activities were supported by the European Commission by including new countries and towns in Europe.

It is evident that integrated planning is attracting more interest in the EU among professionals through different topics that target urban development, the final goal of which is an integrated, sustainable, and resilient town.

6.2 Integrated Planning in Post-Socialist Countries

There were significant differences in the planning approach between Western European countries and the countries in the socialist block until they started the process of transition to a capitalist system. The transition started in the final decades of the 20th century with the aim of changing the political system from the undivided power of the Marxist-Leninist party, with its dominant state and preponderance of bureaucratic coordination, to pluralistic political systems that were friendly to private property and the market, with dominant private property and a preponderance of market coordination (Kornai, 2000).

While in most Western and Central European countries democratic processes and an integrated approach to planning have affected the development of planning theory and practice, the rational planning used in the socialist countries had no characteristics of integrity. By starting the transition process, the former socialist countries have features of integrated planning, but the problems remain. These are directly

connected with the transitional processes in the domains of economy, society, institutional capacity, professional education, etc. Russian urbanism theoreticians (Kosareva & Puzanov, 2012) find that urban planning in Russia needs to improve on its simplified regulation, land use, and urban development from the previous period.

Integrated urban planning needs to be proactive and stimulate urban development. If such planning is competently defined and implemented, it will create efficient tools for managing socioeconomic development and thus a good living environment. Russian urbanism nowadays tends to accept concepts of contemporary planning in hyper-dynamic urban contexts, including integrated approaches such as flexibility, adaptability, and participation (ISOCARP, 2012). In ex-socialist cities, globalisation is visible in the international urban competitions for wider urban spaces (Moscow Agglomeration Development – The 2012 International Urban Competition; Belgrade on the Water 2014), the building of mega structures (international airports, arenas, shopping malls), etc.

In the first phase of the socio-economic transition in the Western Balkan countries, planning mechanisms could not protect public interest and provide active participation. Planners adaptation to new conditions happened simultaneously. Vujošević & Spasić (2007) have a critical view on planning in Serbia at the end of the 20th and the beginning of the 21st centuries. They find that "new ideologies of planning came to the surface, thereby rendering the current practice a peculiar mix of various concepts of "quasi/pseudo planning" exercises" (Vujošević & Spasić, 2007, p. 22). Milojević (2015) thinks that the participation in planning in the first transitional phase in B&H, due to the lack of strategies for spatial and urban development, resulted in the protection of private interests, to the detriment of public interest.

Generally, it is evident that transitional countries do not implement GIS and integrated spatial information systems, unlike the EU countries where new technologies and the updating of spatial data had begun much earlier. There is also a difference between the transitional countries themselves. The countries that started socio-economic and political transition and planning reform earlier, such as the Czech Republic, also introduced information systems and the principles of flexible planning earlier. In this way, they created the preconditions for the implementation of integrated planning.

7 Problems in the Implementation of Integrated Planning in The Republic of Srpska

In spite of the different opinions about when transition starts and when it is finished, there is a widely accepted view that the transition is unfinished as long as the composition of output and real fixed assets is distorted and has not yet adjusted to demand, or the standard of living has not caught up with that of the traditional market economies (Kornai, 2000). In the case of B&H, (The Republic of Srpska and the Federation

of B&H), the preconditions for a completed transition have not yet been reached. Although integrated planning is mentioned in laws as one of the general principles of planning, there are still no socio-economic preconditions for integrated planning in the Republic of Srpska.

This is evident in the lack of regulations, strategies, and harmonised policies at the national level, organisational capacities, and knowledge of integrated planning. Planning teams lack multidisciplinary capacities, which further disables multi-aspect analyses of urban space and environment. Apart from having experts who can deal with the various created artefacts of physical space, it is also necessary to involve professionals in the fields of social sciences and the population as the final users of urban space.

The methodology of integrated planning should be improved with the aim of ensuring more collaboration between professionals and stakeholders, interaction between various planning services, and efficiency in planning procedures. The legislation on flexible planning the law for spatial planning and construction (NSRS, 2010), and an updated version (NSRS, 2013) - as one of the mechanisms of integrated planning, was adopted in 2010 and 2013 in the Republic of Srpska. After 2010, zoning was defined in the law as a new regulatory planning document, which offers more flexibility than the regulatory plan but its implementation in planning practice is progressing slowly. There is a necessity to further improve the planning methodology of zoning and to increase professional capacities for new planning practice. Because of this, and other problems in the society, which is still in transition, the implementation of integrated planning has not yet happened. Consequently, guidelines for integrated planning for planners and all other actors involved in the process of preparing, designing, adopting, implementing, and monitoring the plans are needed.

The law on energy in the Republic of Srpska, adopted in 2009 (NSRS, 2009), created regulations for energy efficiency but it has not yet been implemented because of the lack of standards and educated professionals. Increasing capacities in this domain and other measures for the mitigation and adaptation to climate change are vital for the implementation of integrated planning.

The Land Registry in B&H has not yet been updated for the whole territory. In this time of climate change, there is a need to have a database on natural spatial features formed under the influence of natural and anthropogenic factors. This refers to geological data on landslides activated after the great floods in 2014, maps of flood risks and hazards, maps of renewable energy resources, etc. This data should be connected to the European spatial data infrastructure and expanded with other sources of information and standards to integrate with INSPIRE. It is based on existing resources at the national and subnational levels, which engage user communities and geographic information stakeholders by organising them in spatial data interest communities (Craglia & Annoni, 2010).

The education of students, experts, and other stakeholders to enable their active and competent participation in the planning process and the management of sustainable and resilient development, is not yet at a satisfactory level and, therefore, should be continuously improved. All of this implies that integrated planning is not currently present in planning practice to the extent needed to create a sustainable and resilient space and environment.

8 Conclusions

Integrated planning is a mechanism for creating sustainable and resilient settlements that tends to the needs of modern society. Its importance is particularly pronounced, and there is a need to define and develop it through both theory and practice. Studies of urban development today show that there are significant problems in achieving sustainable and resilient urban areas in many countries (UN-Habitat, *2016b*), and one of the reasons for this is the insufficient application of integrated urban planning.

The nature of integrated planning arises from the complexity and interconnectedness of urban spaces and socio-economic conditions, which tend to develop continuously in space and time. Studies about developing an integrated approach to planning show that it evolved in tandem with the socio-economic development of urban areas and an increasing awareness of the need to create sustainable and resilient environments, which present the highest goals of development on a global, regional, and national level. Integrated planning methodologies have developed especially rapidly over the last few decades, characterised as the age of hyper-dynamic urban context. Urban development involves complex interactions of factors – the natural environment, human-created spaces, the economy, activities connected with socio-cultural and political processes, technology, and planning activities themselves – which all have an effect on the urban space. Integrated planning, as a tool that has developed as the challenges of negotiating these multi-layered interactions have emerged, is one of the most powerful tools for achieving this goal.

Integrated planning methodology is based on the integration of three components – planning, development, and ecosystem sustainability – into a single process. This process can be divided into multiple steps - 8, according to Yigitcanlar and Teriman (2014) - which planners can use to work through all the relevant, interacting features of the local environmental conditions, society, economy, and institutional networks to create the plan, and help to get it adopted by applying expert criteria, collaborating with stakeholders and the public, and applying good negotiating skills. Given the complexity and dynamism of the urban context, integrated planning should be adaptable to frequent changes in space and society; it should also be collaborative, participatory, flexible, and efficient. Flexibility can be achieved by implementing zoning, rather than rigid regulatory planning. Efficiency can be facilitated by ensuring

the system is driven by up-to-date databases containing information on land registration, planning proposals and actions, changing local climatic conditions, and so on, as well as by maintaining a collaborative relationship with stakeholders etc. Legislation relating to spatial planning, which is usually made at the national level, should define the need for an integrated approach to planning that takes into account local conditions, effectively making integrated planning a requirement, which has not yet been achieved in the case of the Republic of Srpska.

Socio-economic policies at both the national and regional levels can have a direct positive effect on the character and application of integrated planning by: basing development strategies and policies on the goal of a sustainable and resilient environment; adopting appropriate legislation that enshrines good practice; establishing strong institutional frameworks; ensuring sufficient capacity of government employees at the national and municipality levels; staff training; and education of planners, students, and stakeholders in the planning process. The recommendations in the UN-Habitat (2015) are of great benefit for all countries, especially for those in transition, such as Republic of Srpska.

Integrated planning in the EU, as defined by common regulations on sustainable urban development (such as the *Urban Agenda for the EU*, 2016 and *The European Charter of Planning*, 2013) is present through projects that apply smart city solutions and offer support tools that allow citizens to contribute to the process in a number of European cities. Although the theoretical assumptions of integrated planning have been developed to apply universally, and are, in the EU, underpinned by common legislation, one of the features of the methodology is that it takes into account local conditions. Integrated planning processes are, in practice, also specific to the localities in which they take place, adaptable to the traditions, development models, and practices of each country individually.

Integrated planning is generally more prevalent in the territory of the EU where, despite some successful examples, a number of challenges remain. Transitional states are still faced with the challenge of developing the socio-economic conditions and corresponding planning systems, which can enable the widespread application integrated planning. To reap the benefits of integrated planning as a tool to create sustainable and resilient environments, post-socialist countries need to improve all aspects of socio-economic relations, strengthen participatory planning, and provide an environment where government, professional, and educational institutions – and the public – can participate in planning processes.

This is especially important for the Republic of Srpska, where there are many problems in integrated planning practice. These problems could be mitigated by following the example of many German cities, where efforts are made at the municipality level to promote integrated approaches to creating sustainable and resilient environments. The participation of professional, scientific, and educational institutions in spatial planning

activities is of great importance for defining a unified methodology of integrated planning, and training planners to implement it. Civic initiatives are also important for different types of engagement and expression of citizens' interests in urban development. In this way, the initiatives of local communities, citizens, educational institutions, and professional associations can contribute to improving regulation at the national level and strengthen the general socio-economic conditions for the implementation of integrated planning.

References

Abukhater, A. B. E. D. (2009). Rethinking planning theory and practice: a glimmer of light for prospects of integrated planning to combat complex urban realities. *Theoretical and Empirical Researches in Urban Management, 2*(11). 64-79. Retrieved from http://www.um.ase.ro

Acheampong, R. A. & Ibrahim, A. (2016). One Nation, Two Planning Systems? Spatial Planning and Multi-Level Policy Integration in Ghana: Mechanisms, Challenges and the Way Forward. *Urban Forum, 27*(1). 1-18. DOI: 10.1007/s12132-015-9269-1

Aksić, D., Burazor, M., Gajić, D., Gvero, P., Kadrić, Dž., Kotur, M., Salihović, E., Todorović, D. & Yagora, N. (2016). *Typology of Residential Buildings in Bosnia and Herzegovina*. Sarajevo: GIZ.

Albrechts, L. (2004). Strategic (spatial) planning re-examined. *Environment and Planning B: Planning and design, 31*(5). 743-758. DOI: 10.1068/b3065

Ban K., (2016), Foreword. In UN-Habitat, *The World Cities Report 2016*. (p. iv). Nairobi: UN- Habitat. Retrieved from http://wcr.unhabitat.org

Berke, P. R., Godshalk, D. R., Kaiser, E. J. & Rodriguez, D. A. (2006). *Urban land-use planning* (5th ed.). Chicago: University of Illinois Press.

Center for Resilience at the Ohajo State University, (n.d). Concepts. Retrieved from http://www.resilience.osu.edu/CFR-site/concepts.htm

Council & Commission of the European Communities (1992). Treaty on the European Union. *Official Journal of the European Communities*, 191, Vol. 35, 29 July 1992. Retrieved from http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:1992:191:FULL&from=EN

Counsell, D., Allmendinger, P., Haughton, G. & Vigar, G. (2006). Integrated Spatial Planning: Is it living up to expectations? *Town and Country Planning*, *75*(9). 243-246.

Craglia, M. & Annoni, A. (2010). INSPIRE: An Innovative Approach to the Development of Spatial Data Infrastructures in Europe. In H. Onsrud (Ed.), *Research and Theory in Advancing Spatial Data Infrastructures Concepts* (pp. 93-106). Redlands, California: Esri Press

Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings. Retieved from http://eur lex.europa.eu/eli/dir/2002/91/oj

Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings. Retieved from http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32010L0031

Doughty, M. R. C. & Hammond, G. P. (2004). Sustainability and the built environment at and beyond the city scale. *Building and Environment, 39*(10). 1223-1333. DOI: 10.1016/j.buildenv.2004.03.008

EC - European Commission (1997), *The EU Compendium of Spatial Planning Systems and Policies.* Luxemburg: Office for the Official Publications of the European Commission. Retrieved from http://commin.org/upload/Glossaries/European_Glossary/EU_compendium_No_28_of_1997.pdf

EC - European Commission (2010). *Europe 2020: A strategy for smart, sustainable and inclusive growth*. Retrieved from http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF

EC - European Commission (2016). *Urban Agenda for EU 'Pact of Amsterdam'*, Agreed at the Informal Meeting of EU Ministers Responsible for Urban Matters on 30 May 2016 in Amsterdam, The Netherlands. Retrieved from http://ec.europa.eu/regional_policy/sources/policy/themes/urban-development/agenda/pact-of-amsterdam.pdf

ECTP-CEU - The European Council of Spatial Planners, Conseil Européen des Urbanistes (2013). *The Charter of European Planning*. Mariembourg: Editions Imprimages. Retrieved from http://www.ectp-ceu.eu/index.php/en/publications-8/the-charter-of-european-planning-213

Elbakidze, M., Dawson, L., Andersson, K., Angelstam, P., Axelsson, R., Stjernquist, I. & Schlyter, P. (2014). Integrated spatial planning for regional development in Bergslagen: How could stakeholder participation be developed in urban and rural landscapes. Baltic Sea Region Programme 2007-2013, Project: Baltic Landscape, Report 13, 2014. Retrieved from https://www.skogsstyrelsen.se/globalassets/projektwebbplatser/baltic-landscape/reports/report-no-13-m.elbakidze-l.-dawson-k.-andersson-et-al-march-2014-integrated-spatial-planning-for-regional-development-in-bergslagen....pdf

Folke, C. (2016). Resilience (Republished). *Ecology and Society, 21*(4):44, 1-30. DOI: 10.5751/ES-09088-210444

Folke, C., Carpenter, S., Elmqvist, T., Gunderson, L., Holling, C.S., & Walker, B. (2002). Resilience and sustainable development: building adaptive capacity in a world of transformations. *Ambio, 31*(5), 437-440. DOI: 10.1579/0044-7447-31.5.437

Folke, C., Carpenter, S., Walker, B., Scheffer, M., Chapin, T., & Rockström, J. (2010). Resilience Thinking: Integrating Resilience, Adaptability and Transformability. *Ecology and Society, 15*(4):20. 1-9 Retrieved from https://www.fs.fed.us/pnw/pubs/journals/pnw_2010_folke.pdf

Fridmann, J. (1971). The future of Comprehensive Urban Planning: A Critique. *Public Administration Review*, 31(3). 315-326. Retrieved from https://ostromworkshop.indiana.edu/library/node/24072

Geerlings, H. & Stead, D. (2003). The integration of land use planning, transport and environment in European policy and research. *Transport Policy, 10*, 187-196. Retrieved from http://www.elsevier.com/locate/tranpol

Gencer, E., Stephens, R. & Johanson, E. (2015). Climate change and action – Planning to increase resiliency. In S. Nan, J. Reilly & F. Klass, *ISOCARP Review 11 - Reinventing planning – examples from the profession*. The Hague: ISOCARP.

German Association of Cities (2013). Integrated Urban Development Planning and Urban Development Management – Strategies and instruments for sustainable urban development. Retrieved from http://www.staedtetag.de/imperia/md/content/dst/internet/fachinformationen/2013/mat_integrierte_stadtentwicklungsplanung_en_gesamt_korr.pdf

Government of the Republic of Srpska, (2012). Energy Strategy of Republic of Srpska up to 2030. Retrieved from http://www.vladars.net/sr-sp-cyrl/vlada/ministarstva/mper/Documents/

Holling, C.S. (1973). Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics, 4*, 1-24. Retrieved from https://pdfs.semanticscholar.org/14a2/a17d7f4178eb96952da5a816dd1e958093d2.pdf

Holling, C.S., & Walker, B. (2003). Resilience defined. Entry prepared for the Internet Encyclopedia of Ecological Economics. Retrieved from http://www.ecoeco.org/pdf/resilience.pdf

ISOCARP – International Society of City and Regional Planners, (2012). *Fast Forward: Planning in a (Hyper) Dynamic Urban Context. Congress Report, 48th ISOCARP Congress, Perm/RUS*. The Hague: ISOCARP. Retrieved from https://isocarp.org/product/2012-48th-isocarp-congress-permrus

Jabareen, Y. (2013). Planning the resilient city: Concepts and strategies for coping with climate change and environmental risk. *Cities, 31*. 220-229. https://www.journals.elsevier.com/cities

Kenworthy, J. (2006). The Eco-City: Ten key transport and planning dimensions for sustainable city development. *Environment and Urbanization, 18*(1), 67-85. DOI: 10.1177/0956247806063947

Konrai, J. (2000). What the Change of System from Socialism to Capitalism Does and Does Not Mean. *Journal of Economic Perspectives*, *14*(1), 27-42. Retrieved from https://www.jstor.org/journal/jeconpers

Kosareva, N. & Puzanov, A. (2012). Urban development and urban planning policy in modern Russia. In S. Nan & C. Grossop (Eds.), *Fast Forward: City Planning in a Hyper Dynamic Age*, (pp. 262-272). Perm, Russia: ISOCARP. Retrieved from https://isocarp.org/product/2012-48th-isocarp-congress-permrus

Lawrence, D. (2000). Planning theories and environmental impact assessment. *Environmental Impact Assessment Review*, *20*(1), 607-625. DOI: 10.1016/S0195-9255(00)00036-6

Lindblom, C. (1959). The Science of 'Muddling Through'. *Public Administration Review*, *19*(2), 79-88. Retrieved from https://faculty.washington.edu/mccurdy/SciencePolicy/Lindblom%20Muddling%20Through.pdf

Milojević, B. (2015). *Cities in changes – Urban form, transformations, influences*. Banja Luka: Faculty for Architecture, Civil Engineering and Geodesy, University of Banja Luka

Milojević, B. (2016). Spatial planning in view of flood protection – methodological framework for the Balkan countries. In E. Vaništa Lazarević, M. Vukmirović, E. Krstić-Furundžić, A. Đukić (Eds.). *Conference proceedings of 3th International Academic Conference on places and Technologies*, (pp. 217-225). Belgrade, Serbia: University of Belgrade-Faculty of architecture. Retrieved from http://www.placesandtechnologies.eu/wp-content/uploads/2016/04/Book-of-Proceedings-_-Digital-_-227-272.pdf

Ministry of Spatial Planning, Civil Engineering and Ecology of Republic of Srpska (2015). *Amendments to the Spatial Plan of Republic of Srpska by 2025*. Official Gazette RS. 15/15. Retrieved from http:/www.vladars.net/sr-SP-Cyrl/Vlada/.../nacrt%20draft%2025%2011%202013.pdf

Moore, S. (2007). *Alternatives Routes to the Sustainable City: Austin, Curitiba, and Frankfurt*. London: Lexington Books.

Muzinger, T. (2016). Public space and mobility. In Schaber, C., Wékel, J. & Zdiara (Eds.) *New Planning Culture in German Cities-Topics, Priorities and Processes*. (pp. 6-9) Retrieved from www.staedtetag.de

NSRS - National Assembly of the Republic of Srpska, (2009), Law on energy in the Republic of Srpska, Official Gazette RS. 49/09

NSRS - National Assembly of the Republic of Srpska, (2010), Law for spatial planning and construction, Official Gazette RS. 55/10

NSRS - National Assembly of the Republic of Srpska, (2013), Law for spatial planning and construction, Official Gazette RS. 40/13

Pickett, S., Cadenasso, M., & Grove J. (2004). Resilient Cities: Meaning, models, and metaphor for integrating the ecological, socio-economic, and planning realms. *Landscape Urban Planning, 69*(4), 369-384. Retrieved from https://www.fs.fed.us/nrs/pubs/jrnl/2004/ne_2004_pickett_001.pdf

Pisano, U. (2012). Resilience and Sustainable Development: Theory of resilience, system thinking and adaptive governance. ESDN Quarterly Report No. 26. Wien: ESDN. Retrieved from https://www.researchgate.net/publication/312495658_Pisano_U_2012_Resilience_and_Sustainable_Development_Theory_of_resilience_systems_thinking_and_adaptive_governance_ESDN_Quarterly_Report_No26

Ray, S. (2012). Rapid urban change demands a theory, tools and a 'fast forward' planning –an assay. In S. Nan & C. Gossop (Eds.). *Fast Forward: City Planning in a Hyper Dynamic Age.* Perm, Russia: ISOCARP. Retrieved from https://isocarp.org/product/2012-48th-isocarp-congress-permrus

Reiß-Schmidt, S. (2016). Urban development process and strategic planning instruments. In Schaber, C., Wékel, J. & Zdiara (Eds.). *New Planning Culture in German Cities-Topics, Priorities and Processes.* (pp. 18-21). Retrieved from www.staedtetag.de

Rotondo, F. & Selocato, F. (2014). The role of G.I.S. for the industrial areas management to prevent the brownfields birth. The case of the Apulia Region in Southern Italy. In A. Djukic, M. Stankovic, B. Milojevic & N. Novakovic (Eds.). *Proceedings of International Academic Conference BrownInfo* (pp. 29-36). Banjaluka: University of Banja Luka Faculty for Architecture, Civil Engineering and Geodesy.

Schaber, C. (2016). New quarters and residential construction. In Schaber, C., Wékel, J. & Zdiara (Eds.). *New Planning Culture in German Cities-Topics, Priorities and Processes.* (pp. 10-13). Retrieved from www.staedtetag.de

Schaber, C., Wékel, J. & Zdiara, A. (Eds.) (2016). *New Planning Culture in German Cities-Topics, Priorities and Processes.* A documentation by Darmstadt University of Technology in cooperation the German Association of Cities and the Federal Institute for Building, Urban and Environmental Research. Retrieved from http://www.staedtetag.de

Shonwandt, W.L. (2008). *Planning in Crisis? Theoretical Orientations for Architecture and Planning.* Aldershot, UK: Ashgate

Stupar, A. & Mrdjenović, T. (2015). Toward the ultimate shape-shifter: testing the omnipotence of digital city. In E.V. Lazarevic, M. Vukmirovic, A. Krstic-Furundzic & A. Djukic (Eds.) *Conference Proceedings 3rd International Academic Conference on Places & Technologies* (pp. 535-540). Belgrade: Faculty for Architecture, University of Belgrade. Retrieved from http://www.placesandtechnologies.eu/conference-proceedings/

Teriman, S. (2012). *Measuring neighbourhood sustainability: a comparative analysis of residential types in Malaysia.* (Thesis). Brisbane: Queensland University of Technology. Retrieved from https://eprints.qut.edu.au/54679/1/Suharto_Teriman_Thesis.pdf

UN – United Nations (1972). Report of the United Nations Conference on the Human Environment, Stockholm, 15-16 June 1972. Retrieved from http://www.un-documents.net/aconf48-14r1.pdf

UN – United Nations (1992). The Rio Declaration on Environment and Development. From the report of The United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, 3-14 June 1992. Retrieved from http://www.unesco.org/education/pdf/RIO_E.PDF

UN - United Nations (2015). Transforming our world: the 2030 Agenda for Sustainable Development, Retrieved from https://sustainabledevelopment.un.org/post2015/transformingourworld

UN-Habitat (1976). The Vancouver Declaration On Human Settlements. From the report of Habitat: United Nations Conference on Human Settlements. Vancouver, Canada, 31 May to 11 June 1976. Retrieved from https://unhabitat.org/wp-content/uploads/2014/07/The_Vancouver_Declaration_19761.pdf

UN-Habitat (1996). The Istanbul Declaration on Human Settlements. From the report of Habitat II: United Nations Conference on Human Settlements. Istanbul 3-14 June 1996. Retrieved from https://documents-dds-ny.un.org/doc/UNDOC/GEN/G96/025/00/PDF/G9602500.pdf?OpenElement

UN-Habitat (2001). Implementing the Habitat Agenda: the 1996-2001 experience. Report on the Istanbul+5 Thematic Committee, 25th special session of the United Nations General Assembly, New York, 6-8 June 2001. Retrieved from https://unhabitat.org/books/implementing-the-habitat-agenda-the-1996-2001-experience/

UN-Habitat (2011a). *Cities and climate change. Global report on human settlements.* London, Washington DC: Earthscan. Retrieved from https://unhabitat.org/books/cities-and-climate-change-global-report-on-human-settlements-2011/

UN-Habitat (2011b). *Affordable Land and Housing in Europe and North America.* Nairobi: UN-Habitat. Retrieved from https://unhabitat.org/books/affordable-land-and-housing-in-europe-and-north-america-2/

UN-Habitat (2013). *Planning and Design for Sustainable Urban Mobility. Global report on human settlements 2013.* New York: Routledge. *Retrieved from https://unhabitat.org/planning-and-design-for-sustainable-urban-mobility-global-report-on-human-settlements-2013/*

UN-Habitat (2015). *International Guidelines on Urban and Territorial Planning*. Nairobi: UN-Habitat. Retrieved from https://unhabitat.org/books/international-guidelines-on-urban-and-territorial-planning/

UN-Habitat (2016a). *UN-Habitat III - New Urban Agenda*. Quito: UN-Habitat. Retrieved from www.habitat3.org/the-new-urban-agenda

UN-Habitat (2016b). *The World Cities Report 2016*. Nairobi: UN-Habitat. Retrieved from http://wcr.unhabitat.org

UNISDR - United Nations International Strategy for Disaster Reduction (2012). *How to make cities more resilient – A Handbook for Local Government Leaders*, Geneva: UNISDR. Retrieved from http://www.unisdr.org/we/inform/publications/26462

Vujošević, M. & Spasić, N. (2007) The transition changes and their impact on sustainable spatial, urban and rural development of Serbia. In M. Vujošević (Ed.) *Sustainable spatial development of towns and cities* (Thematic Conference Proceedings Volume 1). (pp. 1-46). Belgrade: IAUS

Walker, B. & Salt., D. (2006). *Resilience Thinking: Sustaining Ecosystems and People in a Changing World*. Washington: Island Press

Wekel, J. (2016). Urban design and urban identity. In Schaber, C., Wékel, J. & Zdiara (Eds.). *New Planning Culture in German Cities-Topics, Priorities and Processes*. (pp. 14-17). Retrieved from www.staedtetag.de

Yigitcanlar, T. & Teriman, S. (2014). Rethinking sustainable urban development: towards an integrated planning and development process. *International Journal of Environmental Science and Technology, 12*(1), 341-352. DOI: 10.1007/s13762-013-0491-x

Zahao, P. (2010). Sustainable urban expansions and transportation in a growing megacity: Consequences of urban sprawl for mobility on the urban fringe of Beijing. *Habitat International, 34*(2), 236-243. Retrieved from https://www.researchgate.net/publication/248524279_Sustainable_urban_expansion_and_transportation_in_a_growing_megacity_Consequences_of_urban_sprawl_for_mobility_on_the_urban_fringe_of_Beijing

Zdiara, A. (2016). Civil Society Participation and General Quality Standards. In Schaber, C., Wékel, J. & Zdiara (Eds.). *New Planning Culture in German Cities-Topics, Priorities and Processes*. (pp. 22-25). Retrieved from www.staedtetag.de