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INTEGRALNO URBANO PLANIRANJE U TEORIJI I PRAKSI

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Apstrakt:

Integralno urbano planiranje je savremeni planerski pristup blisko vezan sa kompleksnom prirodom grada i potrebom kreiranja održivih i otpornih naselja. Istraživanje je pokazalo da je primjena integralnog urbanog planiranja direktno povezana sa socio-ekonomskim uslovima, zakonodavnim okvirom, kao i profesionalnim i obrazovnim potencijalima društva, što je različito u svakoj zemlji. Pri tome je uočeno da je praksa integralnog planiranja prisutnija u gradovima EU nego u postsocijalističkim zemljama. Ovaj rad fokusira Republiku Srpsku, gdje postoje mnogi problemi u ovoj oblasti. Na osnovu provedenih analiza, vidljivo je da je neophodan konstantan rad na unapređenju metodologije integralnog planiranja, obrazovanja i obuke planera i zainteresovanih strana, jednako kao i jačanje institucionalnih i socio-ekonomskih preduslova za implementaciju integralnog planiranja, posebno u post-socijalističkim zemljama.

Ključne riječi: integralno urbano planiranje, održivi grad

INTEGRATED URBAN PLANNING IN THEORY AND PRACTICE

Abstract:

Integrated urban planning is a modern planning approach close connected with the complex nature of the cities and necessity of creating sustainable and resilient settlements. Research has shown that the implementation of integrated urban planning is directly connected to the socio-economic conditions, legal frameworks, technology, and professional and educational potentials of societies, which differ for each country. 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, 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 urban planning, sustainable city

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 [1], [2]. 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.

Integrated planning is, in theory, based on the evaluation and improvement of the rational planning of the 1950s [3], [4], 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 [5], [6]. 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 [7].

Besides horizontal inter-sectoral integration in planning, there is also vertical integration related to planning at various spatial and governance levels [8]. As some urban phenomena do not have clear spatial boundaries, it is necessary to analyze 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 [3]. 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 organization at the international, national, and local levels, are preconditions for the realization 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. 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 [9], many successful initiatives in this domain have already been realized. 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 [10], [11], [12], [13]. One of the reasons for this is the lack of integrated planning, especially in transitional countries [14], [15]. 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" [3, 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 organizational capacity [16] 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 equality, 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 [17]; Habitat I and II - Conference on Human Settlements, Vancouver, 1976 [18]; and Istanbul, 1996 [19]; the United Nations Conference on Environment and Development, Rio de Janeiro, 1992 [20]; the World Summit on Sustainable Development or ONG Earth Summit 2002, Johannesburg, 2002; Rio+10, 2002 and Rio+20, 2012 etc.). 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 [21], [22]. [23], [24], etc.

Climate change, economic recession, and refugee crises, which have affected the whole planet, emphasize 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 [24] 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 [25] 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" [26, 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 [2], which plays a key role in pursuing the Europe 2020 objectives [27].
The above UN and EU documents are significant political, institutional, and organizational guidelines for the implementation of an integrated approach to planning and managing urban development.

3. 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 [1]. Albrecht [1] 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).
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 [28, 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 [28]. Teriman [29] 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. 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.

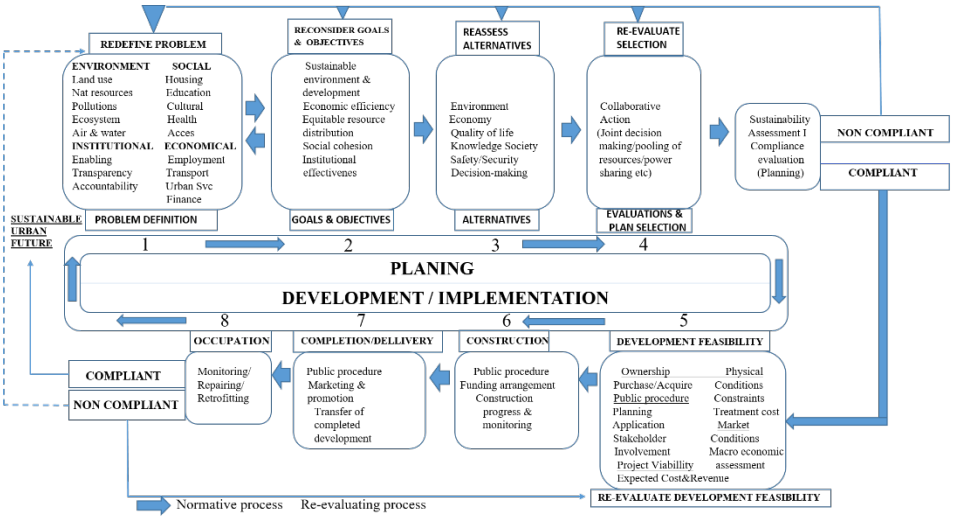

Figure 1. Proposed integrated urban planning and development process [28]

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 [30]. 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 [14], [6] can be more easily accepted in the planning process.

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.

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 characterized by a strong, intensifying link between society and technology. Information technology is considered a powerful instrument for achieving integrated planning and development. 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 [31].

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 [32]. Protection against floods in the context of climate change implies making development decisions on the basis of current and potential future risks of extreme hydro-meteorological events [33]. 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.

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, recognized 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 [10], which has been the case in former socialist countries since the 1990s. Figure 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.

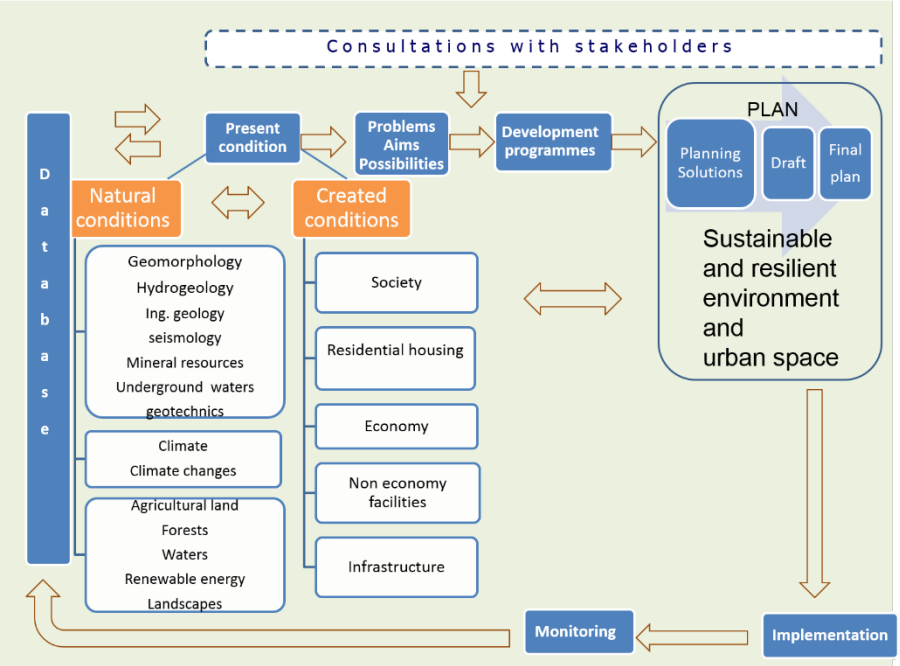

Figure 2. A proposed methodology for integrated planning in Republic of Srpska in accordance with the law for spatial planning and construction. (Image by Milojevic, 2015)

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 [9]. One of the principal cross-cutting topics of strategic significance is the international outlook and cooperation between European cities.

4. 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 [1], [3], [4], and others and the recommendations of UN-Habitat [24], [26] and EU bodies [25], 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 [14]. They are the result of specific spatial and urban development

at the national level, administrative divisions, regulatory frameworks, planning systems, economic development, organizational 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 [34].

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.

4.1. 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 [35], 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 [36], which were followed by the development of theories and approaches in practice in certain EU countries.

Albrechts [1], states that according to the European Commission [36], 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.

Albrechts wrote: "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" [1, 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. [37] 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 [38] 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 realized 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 [9]. The renovation

and redesign of public urban spaces for a dynamic urban society, with a variety of functional requirements, were realized 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 realized through the projects in Augsburg, Dortmund, Freiburg, Kassel and Munich [39]. New urban quarters were realized 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. [40]. Projects that ensured the quality of urban design, preservation, and reconstruction of urban space were realized in Biberach, Dortmund, Mainz, Munich, Dresden, Halle, Potsdam, Saarbrucken, Siegen, and Wolfsburg [41]. A process-oriented approach and strategic urban development planning were realized 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. Guaranteeing civil participation in urban development processes is present in most German cities [42].

Six EU countries (Germany, Italy, France, Holland, England and Spain) started creating Smart Cities and Communities in the EU [25] 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.

4.2. INTEGRATED PLANNING IN THE REPUBLIC OF SRPSKA AND PROBLEMS IN THE IMPLEMENTATION

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 [43]. 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 harmonized policies at the national level, organizational 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 [44], and an updated version [45] - 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 [46], 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 organizing them in spatial data interest communities [47].

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.

5. CONCLUSIONS

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, characterized 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 [28] - 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.

Integrated planning in the EU, as defined by common regulations on sustainable urban development such as the Urban Agenda for the EU [25], and The European Charter of Planning [48] 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.

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.

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