How Do Local and Regional Strategies Address Blue-Green Infrastructure? the Case of Slovakia

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Abstract. The study investigates blue-green infrastructure, the essential factor of sustainable urban development. Blue-green infrastructure helps cities and regions, among other things, to generate benefits in providing services, strengthening resilience and solving environmental issues and crises. The study uses literature review and content analysis to examine blue-green infrastructure and the contexts in which it is used. Regarding the conditions of the Slovak Republic, altogether eight strategic documents of regional cities and eight strategic documents of regions were analysed, focusing on partial components of blue-green infrastructure. Based on the literature review and content analysis of local and regional strategic documents in selected self-government units, seven complementary components of the blue-green infrastructure have been identified, green infrastructure, administrative roles, green-blue infrastructure services, green-blue infrastructure benefits, climate change adaptation, community impact, and blue infrastructure. This study's primary benefit lies in its contribution to the ongoing discussion about the sophistication of blue-green infrastructure, which supports resilient urban development and the sustainable growth of local and regional communities.

Keywords: blue-green infrastructure · blue-green infrastructure benefits · green infrastructure · blue infrastructure · strategic documents · Slovakia

1 Introduction

Environmental challenges as a result of climate change and green transition require responses from public administration at different levels of government. Responses of states, regions and cities involve different elements of blue and green infrastructure, which complement traditional grey infrastructure functions in urban areas. As a result of long-term development, the combination and synergic effect provided by a combination of grey, green and blue infrastructure leads to the emergence of green-blue infrastructure elements and solutions. Despite the rising integration of the term blue-green infrastructure into different types of policies and strategies, this phenomenon is still relatively unexplored, especially in terms of its components and evaluation (de Rijke et al. 2025; Molné et al. 2023).

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The study aims to contribute to the intensive scientific discussion on the importance of blue-green infrastructure in its theoretical and practical aspects. The study aims to realise preliminary research and investigate the blue-green infrastructure agenda in the Slovak Republic. The study uses qualitative and quantitative aspects of content analysis to examine blue-green infrastructure verbal data content included in strategic documents adopted at Slovakia's regional and local levels. The research sample consists of eight self-governing regions and eight regional cities in the Slovak Republic, more precisely, mandatory strategies called Plans of economic and social development in selected regions and cities.

2 From Grey to Blue-Green Infrastructure

Traditional engineering approaches based on grey infrastructure are not able to meet all the challenges of sustainability associated with growing urbanisation, posed by increasing urban population and consumption (Boogard 2024; Perrelet et al. 2024; Pinto et al. 2023; de Oliveira et al. 2022). Grey infrastructure is a usual and standard man-made infrastructure or solution designed to provide individuals and businesses with specific services and its role is mainly functional support for urbanised areas (Wang and Banzhaf 2018; Liquete et al. 2015). Grey infrastructure alone is not capable of addressing contemporary environmental trends and challenges.

Climate change is increasing the magnitude and frequency of numerous environmental challenges, mainly floods, storms, and landslides, making adaptive solutions crucial (Capobianco et al. 2024; Das 2024). In the last decade, public administration has continuously shifted from grey to blue-green infrastructure (European Union, 2024). In the last decade, we can identify a growing emphasis on the functions and benefits of blue-green infrastructure at local, regional, national and European governance levels. The term blue-green infrastructure originally consisted of green infrastructure and blue infrastructure. Compared to traditional grey infrastructure, blue-green infrastructure can provide multiple functions to urban areas.

2.1 Green Infrastructure and Blue Infrastructure

Green infrastructure has become an essential part of policies and strategies at different levels of government worldwide, mainly due to the increasing environmental and natural issues and disasters. The successful green transition depends, to a large extent, on the ability of various government levels to deliver sustainable infrastructure elements (OECD, 2022). The importance of green transition has resulted in integrating green infrastructure into urban planning to address green transition in our society (Vitulano 2024). This concept emphasises integrating green solutions with other grey infrastructure systems, creating new elements and redesigning existing and traditional urban solutions (Grabowski et al. 2022). Green infrastructure should be used by urban and building designers to achieve wider environmental goals (Pereira et al. 2023).

European Commission sees green infrastructure as a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services (European Commission 2021).

From a practical point of view, green infrastructure helps states, regions, cities and communities utilise environmental, social and economic development with a focus on sustainability (Korkou et al. 2023; Ying et al. 2022; Lennon 2014). Based on systematic research, Ying et al. (2022) created a spatial scale composed of (1) region/macroscale (green corridors, green patches, wildlife migration corridors, green countryside), (2) city/mesoscale (green alley and street, public park, urban wetland, urban forest, urban waterfront, urban greenway), and (3) site/micro-scale (rain garden, grass channel, retention ponds, permeable pavement, ecological parking, green roof).

Building green infrastructure is not just a goal but a powerful catalyst for social, environmental and economic benefits. To be more precise, green infrastructure holds the potential to create social benefits (encouraging healthy and sustainable lifestyles, supporting urban communities, investing in liveable spaces), environmental benefits (enabling long-term climate resilience, making smart and connected landscapes, fostering urban biodiversity), and economic benefits (integrating urban food, renewing urban spaces, allowing energy and resource efficiency) (ARUP 2014).

With the rising importance of green infrastructure, blue infrastructure is also being implemented in policies and strategies. The strong emphasis on blue infrastructure is ultimately the result of decades of economic development, urbanisation, as well as the degradation and conversion of natural land into areas used for human activities (Iojă et al. 2021).

States, regions, cities and communities aim to utilise blue infrastructure to mitigate urban warming, and extreme heat has become a widely concerned issue for promoting cooler cities (Cheng et al. 2023). Blue infrastructure is an important heat mitigation strategy that alleviates thermal discomfort in urban infrastructure (Cheng et al. 2023; Lin et al. 2020).

Blue infrastructure refers to the network of water bodies and water management systems in urban and rural areas. It refers to natural bodies such as rivers, lakes, ponds, wetlands, other water features, and engineered structures, such as drainage systems, canals and flood control mechanisms (Severin and Michalíková, 2024). According to the character of partial elements, the design and construction of blue infrastructure require sophisticated, in-depth observation of the natural systems and incorporation of desired outcomes of the interventions (Bugnot et al. 2018).

Due to its predominant use in the field of drainage and water management, practitioners and researchers from various disciplines are increasingly using the term ‘blue infrastructure’ to refer to water-related surfaces such as wetlands, rivers and ponds, or to strategies employed for flood control (de Oliveira et al. 2022; Andersson 2018; Pauleit et al. 2017).

Blue infrastructure represents an integral part of environmental public policies at different levels of government. However, this term is mainly used as a part of or in combination with green infrastructure. Thus, the most used term in contemporary times is blue-green infrastructure.

In summary, green infrastructure refers to natural and semi-natural elements, such as parks, gardens, urban forests, and green roofs, while blue infrastructure encompasses water bodies, waterfronts, and aquatic features (Das 2024). Green infrastructure and blue infrastructure elements can fulfil multiple purposes. The key is not only the creation of

these elements in the territory but also the evaluation of the quality of these elements, which are intended to achieve the desired benefits (Wang and Banzhaf 2018). Current trends and challenges forced states, regions and cities to combine the benefits of green infrastructure and blue infrastructure in its multidimensional context.

2.2 Blue-Green Infrastructure

The connection of green infrastructure and blue infrastructure elements has a growing impact on contemporary environmental policies at national, regional and local levels of governance. The conceptual approach to green and blue infrastructure elements is also gaining interest at the European level. Key stakeholders perceive the importance and the potential of integrating green and blue elements into blue-green infrastructure.

Integrating the green (soft areas, plants and trees) with the blue (watercourses, ponds, lakes and storm drainage) elements makes our urban spaces more resilient, pleasant and healthy places to live, work and play (GreenBlue Urban 2025). These integrated solutions resulting from green (land) and blue (water) spaces can improve environmental conditions and, therefore, citizens' health and quality of life (European Commission 2021).

Blue-green infrastructure refers to an interconnected network of natural and semi-natural elements that provide multiple environmental, social, and economic benefits, emphasising the value that nature provides to human society and also helps to avoid relying on infrastructure that is expensive to build when nature can often provide cheaper, more durable solutions (Severin and Michalíková, 2024). Put differently, blue-green infrastructure initiatives can be implemented to provide cost-effective solutions to urban challenges and hence advance the achievement of many Sustainable Development Goals (de Oliveira et al. 2022). In this regard, green-blue infrastructure combines the functions and services of green infrastructure and blue infrastructure to utilise their impact on environmental issues and sustainable development.

Blue-green infrastructure is currently very often grounded in nature-based solutions. A stronger integration of nature-based solutions into nested green and blue infrastructure planning could be a promising way forward in urban and landscape planning (Langemeyer and Baró 2021). Nature-based solutions are inspired and supported by nature, are cost-effective, simultaneously provide environmental, social and economic benefits, and help build resilience. Such solutions bring more diverse nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions (European Commission 2025). Nature-based solutions are actions to protect, sustainably manage or restore natural ecosystems that address societal challenges such as climate change, human health, food and water security, and disaster risk reduction effectively and adaptively, simultaneously providing human well-being and biodiversity benefits, for example (World Bank Group 2022). Using nature-based solutions can be more cost-effective and create additional co-benefits than relying solely on conventional infrastructure, because overall capital costs are generally lower for nature-based solutions than for conventional infrastructure, although maintenance costs can be higher (OECD, 2023). Typical examples include soil system degradation management, watershed protection, and forest protection and restoration.

Analysis of 850 peer-reviewed publications revealed that green infrastructure and blue infrastructure is associated with important ecosystem services such as local temperature regulation, climate change adaptation, recreation and aesthetic appreciation, benefits of parks and other different uses of green spaces, while some ecosystem services are still developing and are still relatively unexplored (Veerkamp et al. 2021).

From the practical point of view, blue-green infrastructure elements typically combine green infrastructure, such as parks, green roofs, and urban forests, with blue infrastructure, which includes water bodies like rivers, lakes, and wetlands (Severin and Michalíková, 2024). Blue-green infrastructure elements can be applied on different levels of government and implemented alone or associated with others (Meng et al. 2023). With regard to its scope and interdependence, blue-green infrastructure ideally refers to a strategically planned network of natural and semi-natural areas and tools with other environmental features (European Commission 2018).

A wide range of environmental services provided by blue-green infrastructure elements promoted blue-green infrastructure to the multifunctional concept (Cook et al. 2024; Romańczak et al. 2024; Korkou et al. 2023; Wang and Banzhaf 2018; Bears 2018; Breuste et al. 2015). The multidimensionality of blue-green infrastructure also leads to various benefits perceived by relevant stakeholders living in regions and cities.

2.3 Blue-Green Infrastructure Benefits

The multidimensionality of blue-green infrastructure directly indicates that blue and green elements in the territories generate a different and wide range of benefits. Generally speaking, blue-green infrastructure positively impacts the urban population and fundamental living functions (Azadgoleh et al. 2025; Haase 2015).

The practical benefits of blue-green infrastructure, among the most important ones, are usually expressed through flood mitigation, biodiversity enhancement, improved air quality, climate resilience, recreational spaces, aesthetic value, and economic benefits (Severin and Michalíková, 2024). Blue-green infrastructure also has a significant direct and secondary influence on various environmental mechanisms in the territory, such as vegetation, soil system, water transfers, or wind direction (Jones et al. 2024).

Blue-green infrastructure represents an important attribute of sustainable development; as two sides of the same coin, it has the potential to solve a number of problems and, at the same time, ensure benefits.

The flow of benefits from GBI to inhabitants and relevant local stakeholders is mostly mediated by three filters: framework, infrastructures, institutions and perceptions (Kronenberg et al. 2021). The combination of these three filters is generally outlined and defined in different types of policies, strategies, documents and action plans. Policies and strategies connect visions and goals with practical elements of blue-green infrastructure, as well as the services and benefits they are built and maintained for.

Benefits generated by blue-green infrastructure must be systematically planned and purposefully coordinated. Put differently, blue-green infrastructure elements must be built and maintained in accordance with policies and strategies. Systematisation of blue-green infrastructure benefits through policies and strategies can be perceived as an important part of sustainable development, especially thanks to systematic urban

Table 1. Benefits of blue-green infrastructure

Authors	Benefits of blue-green infrastructure
Fenoglio et al., 2024; Perrelet et al. 2024	Biodiversity
Benoit et al. 2025; Perrelet et al. 2024; Tate et al. 2024; Choi et al. 2021; Rouse and Bunster-Ossa 2018; Cole et al, 2017; Deak and Bucht 2011	Climate change adaptation
Ferreira et al. 2024; Hanna et al. 2024; Sun et al. 2024; Vogel 2024	Climate change mitigation
European Commission 2025; Bray et al. 2024; Iojă et al. 2021; Haase, 2015; Kernaghan and Sturgeon 2024; Lõhmus and Balbus 2015	Health and liveability
European Commission 2025; Bray et al. 2024; Das 2024; Kim et al. 2024; Pinto et al. 2023	Quality of life and wellbeing
Kim et al. 2024; Jones et al. 2024; van Renterghem et al. 2012	Reduction of pollution
Ambily et al. 2024; Boogard 2024; Monaco 2024; Ojo 2024; Anderson et al. 2021	Resilience of the ecosystem
Monaco 2024; Tetrytskyi 2024; Cole et al. 2017	Sustainable development
Azadgoleh et al. 2025; Monaco 2024; Shi 2020	Social justice, inequality and social marginalisation

Source: authors

governance and the involvement of relevant local stakeholders (Scott and Hislop 2024; Pinto et al. 2023; Johns 2019).

Blue-green infrastructure represents a narrative integrated into different sectoral policies in the past 10 years (Chatzimentor et al. 2020; Hislop et al. 2019; Artmann et al. 2019; Lennon, 2014). Containing green-blue infrastructure in policies and strategies has become common practice (Shi 2020).

2.4 Blue-Green Infrastructure - Current Research Gap

Based on the abovementioned, building and maintaining blue-green infrastructure can be perceived as a trend among the regions and cities. This trend focusing on environmental challenges can be perceived as intentional steering of urban development that shall secure required climate change actions and desired benefits for citizens.

Despite unquestionable blue-green infrastructure benefits, opinions continue to emerge, pointing out that this phenomenon still needs deeper research. It is still perceived as a relatively new term in urban planning and governance, especially in its practical meaning (Marot et al. 2024; Scott and Hislop 2024; Simon et al. 2021; Veerkamp et al. 2021).

Based on the research conducted so far, there is an evident need to define and clarify what we understand by these terms. (Grabowski et al. 2022; Matsler et al. 2021).

Theoreticians also mention problematic assessment, the vagueness of the term GBI and its low impact on urban development (de Macedo et al. 2021). These doubts and uncertainties might lead to confusion, unintended consequences or unmet promises (Matsler et al. 2021). However, all these similar opinions can be countered by the idea that the concept of blue-green infrastructure was created as flexible, robust and adaptable to specific needs (Matsler et al. 2021; Garmendia et al. 2016).

3 Methods

The study aims to realise preliminary research and investigate the blue-green infrastructure agenda in the Slovak Republic. The study uses qualitative and quantitative aspects of content analysis to examine blue-green infrastructure verbal data content included in strategic documents adopted at Slovakia's regional and local levels. Ahead of this analysis, the study theoretically examines the phenomenon of blue-green infrastructure and its importance and benefits.

The study aims to answer research questions: (1) What is the frequency of use of the terminology of the blue-green infrastructure in the selected strategic documents adopted by selected regional and local self-governing units in the Slovak Republic? – What helped to examine whether the selected phenomenon is gaining serious attention from selected self-governing units? (2) In which contexts and through which elements do selected regions and cities use the term blue-green infrastructure? – to identify the decomposed meaning of blue-green infrastructure elements in practice; (3) What is the consistency and interconnectedness of strategies at the regional and local level? – to identify whether regional and local levels of self-government pay attention to similar aspects of blue-green infrastructure.

The research sample consists of eight self-governing regions and eight regional cities in the Slovak Republic. The research sample was selected intentionally; thus, the study covers all eight self-governing regions and eight regional cities, the selection of which results from their significance in the Slovak conditions. Regional cities provide public services for a wider territory. These eight cities are also the headquarters of the self-governing regions´ offices. The importance of eight regional cities is also underlined by the fact that 20,96% of the population in the Slovak Republic lives in regional cities. The status of a regional city is not associated with any special or unique legal status or competencies. The main difference between cities and other units is determined by the fact that cities realise key activities focused on the production of public services both for their residents and residents from the nearest territory. Slovakia's regional cities have even more financial, material, and human resources than small municipalities.

The content analysis focused on the frequency of blue-green infrastructure usage and on interpreting and understanding the context of examined phenomena in adopted strategic documents by selected self-governing units. The study analyses mandatory strategic documents that must be adopted by self-government units, mostly called Plans of development or Plans of economic and social development. Figure 1 shows the validity of the analysed regional and local strategies.

Content analysis was used to get an in-depth view of relevant aspects of blue-green infrastructure. The results of the content analysis identified the most frequently used

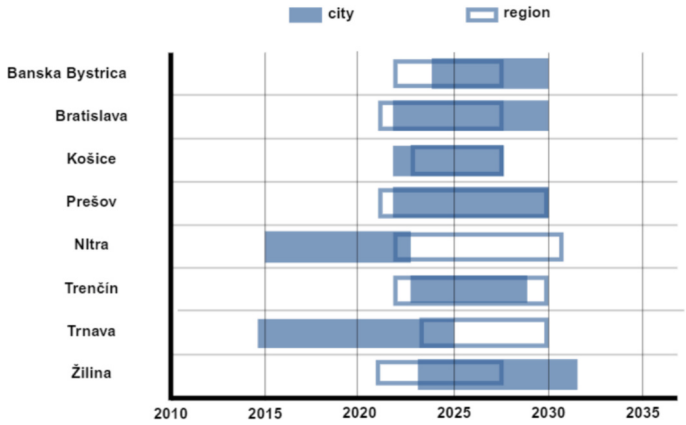

Fig. 1. Plans of Economic and Social Development in selected regions and cities – adoption and validity: Source: authors

terms in connection with blue-green infrastructure, which were subsequently grouped into clusters based on their content.

Theoretical analysis was used to analyse the contemporary state of research focusing on the concept of blue-green infrastructure. A literature review was used to integrate findings and perspectives from empirical studies. Previous research from different scientific disciplines was investigated to demonstrate the contemporary state of knowledge in the sphere of blue-green infrastructure, an important part of this part of ecosystems and the benefits of blue-green infrastructure.

4 Findings and Discussion

The term blue-green infrastructure is included multiple times in almost all analysed strategies, except one city and two regions. Put differently, the term blue-green infrastructure is used 71 times, 49 times in cities´ strategies and 22 times in regions´ strategies. Other key decomposed terms are green-blue areas, mentioned 72 times and green-blue solutions mentioned 15 times. The decomposition of blue-green infrastructure on green and blue aspects reveals a difference between the occurrence rate of green infrastructure (75 times) and blue infrastructure (23 times).

Strategies of selected regions and cities define blue-green infrastructure in different intensities and contexts. Altogether 919 terms connected to blue-green infrastructure were identified, more precisely 493 at the local and 426 at the regional level. The following clusters were identified based on qualitative content analysis of selected strategies adopted by regions and cities in the Slovak Republic (Fig. 2).

4.1 Blue-Green Infrastructure Services and Benefits

The cluster of blue-green infrastructure services includes services for the ecosystem with elements of blue-green infrastructure. By service, we mean an action that has a targeted

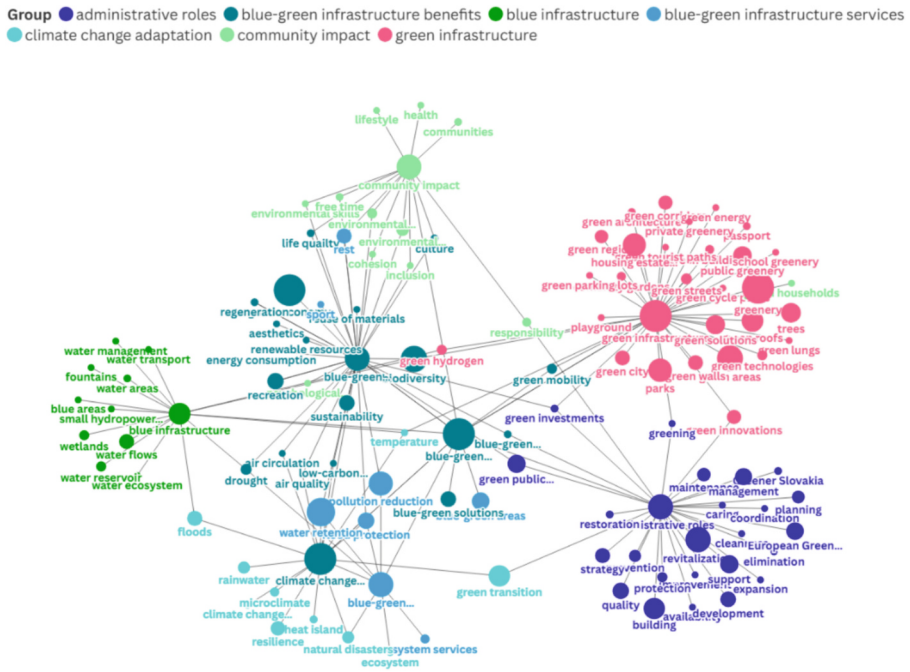

Fig. 2. Clusters of blue-green infrastructure contexts: Source: authors

and positive impact on the ecosystem or its specific parts, such as other parts or relevant local or regional stakeholders. In this regard, services should be perceived as not random but rather systematic and planned efforts of self-government units to change the current state of the ecosystem.

The primary benefits of blue-green infrastructure mentioned in the analysed documents respond to the need to reflect on solving current trends, challenges and issues in contemporary ecosystems. Climate change adaptation is the most frequently used term, followed by key activities of regions and cities that help to reduce the negative impact of climate change, mainly flood protection, water retention, pollution reduction and drought reduction. At the same time, these conscious activities help regions and cities prevent and overcome the negative impact of natural disasters.

4.2 Blue-Green Infrastructure Benefits

The cluster blue-green infrastructure benefits groups of words connected with helpful or good effect elements of blue-green infrastructure. Priority is given to benefits that actors directly intend as an improvement to the current state. Benefits that may not be directly intended by a specific solution or element of blue-green infrastructure are also included here.

Direct benefits resulting from blue-green infrastructure mainly include climate change adaptation, flood protection, water retention, and pollution reduction. Thus, these benefits directly contribute to preparing and solving the negative connotation of

green challenges and issues. Positive benefits are mentioned mainly in the context of biodiversity, air quality, and air circulation.

Subsequently, regions and cities perceive secondary benefits of blue-green infrastructure, mainly culture, aesthetics, recreation, sport, regeneration, rest, and free-time spending. The engagement of relevant communities must emphasise these benefits. Achievement of these benefits in regions and cities leads, based on the content of the documents, to better environmental awareness, effective environmental education and strengthening of environmental skills, as well as better inclusion and cohesion.

Selected documents see the benefits of blue-green infrastructure in the context of sustainability through lower energy consumption, reuse of materials and renewable resources.

4.3 Green Infrastructure

Another cluster of green infrastructure includes elements that can act independently due to their green character. These are elements that, due to their character and together with other elements and solutions, can contribute to the synergic effect of blue-green infrastructure.

The most frequently used terms in the context of green infrastructure are green areas, green solutions and green infrastructure. Based on the selected research sample, important terms are also green city and green region. Green buildings and green architecture are also terms that have a wider meaning for regions and cities, mainly in connection to green roofs and green walls.

An important topic of the analysed documents relates to green mobility, mainly in close connection to green streets, green corridors, green tourist paths and green cycle paths. Consideration of green infrastructure requires the use of greenery, while analysed documents use this term in different meanings, mainly public greenery, private greenery, housing estate greenery, and school greenery. Greenery is also indirectly linked to parks, trees and community gardens, which represent other important elements of green infrastructure. Subsequently, the term trees is also used with the word passport, which helps cities record all necessary information about trees in their territory. Analysed documents also, to a lesser extent, use another term, such as biodiversity, green technology, temperature, playground or green lungs.

4.4 Blue Infrastructure

Blue infrastructure includes elements that can act independently due to their blue or water character. These are elements that, due to their character, together with other components and solutions, can contribute to the synergistic effect of blue-green infrastructure.

The most frequently used terms in the context of blue infrastructure are blue areas, blue solutions and blue infrastructure. The following words are often used within the blue infrastructure context: biodiversity, water flows and water management. Blue infrastructure elements are discussed mainly through water reservoirs, fountains or small hydropower plants. At the same time, blue infrastructure is used in the context of negative phenomena that are used to prevent, mitigate or eliminate their negative impacts, mainly floods, rainwater and drought.

4.5 Climate Change Adaptation

Climate change adaptation includes areas focused on measures related to climate change. These are primarily activities aimed at adapting and mitigating contradictory impacts and creating elements of blue-green infrastructure to create positive impacts.

Selected regions and cities often connect climate change to broader terms, significantly impacting society and the economy. In this regard, documents discuss the importance of climate change adaptation in strengthening resilience and reflecting the green transition. Analysing strategic documents also puts pressure on natural disasters, floods, flood protection, water retention, and rainwater collection. Adaptation to climate change is also discussed with a focus on temperature, microclimate, air circulation, heat islands and low-carbon solutions.

4.6 Community Impacts

Community impacts are related to secondary effects that flow to different communities in an area. Positive impact depends not directly on a specific element but rather on the setting and relationships in a given community. Put differently, impacts may differ in different communities and blue-green infrastructure elements, as well as in regions and cities.

Selected self-government units declare the importance of communities through the analysed documents, mainly through the frequency of the word community, and also thanks to the words cohesion, inclusion and responsibility. Blue-green infrastructure is also expressed with its need to improve environmental awareness, education, and skills. This tendency suggests that regions and cities understand the importance of well-informed and educated citizens.

Blue-green infrastructure is subsequently mentioned in its impact on free-time spending, citizens resting, culture, sport, and also a positive impact on life quality and health.

4.7 Administrative Roles

Cluster administrative roles group operational and systematic activities of selected regions and cities related to blue-green infrastructure.

Among other issues, the administrative roles cluster groups strategic and systematic activities of regions and cities, especially thanks to the reflection of strategical documents European Green Deal and the national document Greener Slovakia.

Other partial activities focus attention on planning, development, management, protection, coordination, building, restoration, expansion and support. Greening and caring can be perceived as very specific roles connected to the existence of blue-green infrastructure in the territory. Subsequently, green public procurement and green investments can also be perceived as a direct result of green transition, which is also discussed in the context of the analysed strategic documents.

4.8 Compliance and Interconnectedness of Regional and Local Strategies

Regional and local levels of self-government should generally collaborate to ensure the development of certain territories. The conceptual basis for sustainable development and strengthening of blue-green infrastructure should be perceived as an important part of short-term and long-term success. The main reason is that environmental and climate change challenges cannot be limited to a small territory. These challenges do not respect the administrative boundaries of regions and cities. In this regard, compliance of local development strategies with regional local strategies is not just a legal obligation, but also a rational consequence of environmental challenges character, including blue-green infrastructure issues.

Figure 3 shows the 15 most used terms connected to blue-green infrastructure identified during the analysis of the strategic documents of regions and selected cities in the Slovak Republic.

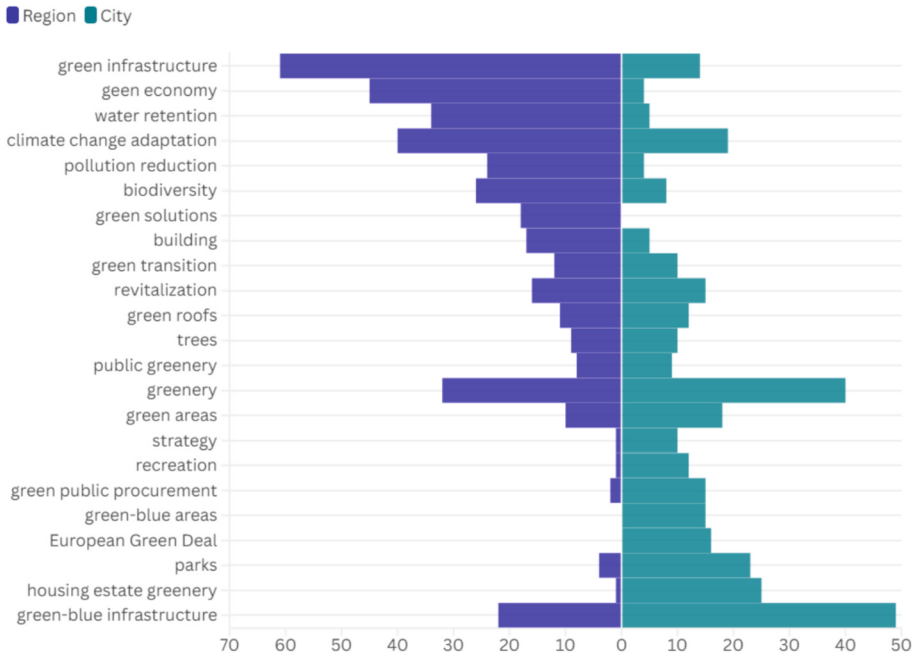

Fig. 3. Compliance and interconnectedness of regional and local strategies: Source: authors

Self-governing regions focus their attention mainly on those aspects of blue-green infrastructure which are focused on activities such as climate change adaptation, green economy, water retention, biodiversity, and pollution reduction. These terms can be perceived as fluid and developing based on the changing intensity of environmental challenges. On the other hand, cities usually connect their strategic goals with greenery, parks, and also infrastructure in general. The term greenery is also often used in regional documents, but the significant difference was identified through the words housing estate

greenery, public greenery and parks. However, a few similar practical priorities were identified, mainly green roofs, trees, green transition reflection and revitalisation. The focus of regions and cities is mainly on green aspects of blue-green infrastructure rather than blue or water elements of blue-green infrastructure.

5 Conclusion

Blue-green infrastructure is an important aspect of sustainable development. It has the potential to solve several issues and ensure benefits. Systematic planning and purposeful coordination are essential for the generation of benefits from blue-green infrastructure. The creation of policies and strategies to organise blue-green infrastructure can be seen as a key part of sustainable urban development.

The preliminary research results revealed the importance of blue-green infrastructure in the selected sample of local and regional self-government units. They also revealed the contexts in which the examined term is mostly mentioned. Based on the literature review and content analysis of local and regional strategic documents in selected self-government units, seven complementary components of the blue-green infrastructure have been identified: green infrastructure, administrative roles, green-blue infrastructure services, green-blue infrastructure benefits, climate change adaptation, community impact, and blue infrastructure.

The study's main benefit is its contribution to the important discussion about the sophistication of blue-green infrastructure as part of the resilient urban development and sustainable growth of local and regional communities. Although the study had many benefits, there are still limitations that need to be addressed in future research. Firstly, our findings were based on the intentional selection of self-government units in a specific country. The extension of our research can be furthered from the following aspects, mainly the broadening of the empirical evidence and further analysis of different approaches to blue-green infrastructure across municipalities, cities, regions and governments. Widening the scope to include more countries and conducting international comparisons could be very useful and valuable in this context.

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