EUROPEAN
GREEN CAPITAL

An initiative of the
European Commission

Expert Panel
Technical Assessment Synopsis Report
European Green Capital Award 2025

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www.ec.europa.eu/environment/europeangreencapital

Colophon

Acknowledgements

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Phrenos, an event and communication agency based in Belgium, is currently appointed as the European Green Leaf Award Secretariat. With respect to the competition's application process and the work of the Expert Panel and Jury, the Secretariat is supported by the international design and consultancy firm Arcadis.

The Secretariat also assists with PR activities related to the European Green Leaf Award through the European Green Capital and Leaf Award website, Facebook, Twitter and LinkedIn pages, and through various communication channels such as brochures, press releases, newsflashes and film clips etc. (can be accessed on the website).

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1. Introduction

1.1 Background

The European Green Capital Award (EGCA) has been awarded by the European Commission since 2010. The objectives of the EGCA are to:

- Recognise and publicly acknowledge cities that have a consistent record of working towards high environmental standards.
- Encourage cities to intensify and speed up current targets and commit to ambitious goals for further environmental improvement and sustainable development.
- Engage citizens in embracing change, inspire others and promote experience and best practice in other European cities.

The EGCA 2025 competition cycle was launched on 17th January 2023. The deadline for applications was 30th April 2023. As in previous years, the Expert Panel carried out a technical assessment of each of the seven environmental indicators (detailed in Section 2.3) for all applicants. The Expert Panel provided grades for the three sections (Present situation, Past performance, and Future plans) of each indicator together with qualitative comments. Guided by the Expert Panels' recommendations, a shortlist of cities was established by the Commission and subsequently submitted to the Jury.

Taking into account the Expert Panel's proposals and information presented to the Jury, the Jury will select one city to be awarded the title of European Green Capital 2025. The winner will be announced at the EGCA Ceremony on 5th October 2023 in Tallinn, the 2024 European Green Capital. Details of the competition process were set out in the published Rules of Contest[1] for this competition cycle, see Section 2.1.

1.2 Aim of this Report

This Technical Assessment Report provides a summary of the Expert Panel's technical evaluations which are the basis for shortlisting the finalist cities.

[1] EGCA-EGLA 2025 Rules of Contest (europa.eu)

2. Technical Assessment Procedure

2.1 Applicant Cities for EGCA 2025

A total of ten cities applied for the EGCA 2025 competition. All cities submitted valid applications. Details of the 2025 applicants are included in Table 2.1 and Figure 2.1.

Table 2.1 - Details of Applicant Cities (presented in alphabetical order)

No.	City Name	Country	Population	CoM[2] signatory	GCA[3] signatory	Part of 100 Cities Mission[4]
1	Brașov	Romania	290,000	X	X	
2	Brescia	Italy	200,000	X		
3	Cagliari	Italy	150,000	X		
4	Graz	Austria	300,000			
5	Guimarães	Portugal	156,900	X	X	X
6	Logroño	Spain	150,000	X	X	
7	Novara	Italy	103,300	X	X	X
8	Poznań	Poland	543,400	X		
9	Rzeszów	Poland	197,600			
10	Vilnius	Lithuania	592,400	X	X	X

Figure 2.1 - Map of European Green Capital 2025 Applicant Cities

2.2 Technical Assessment

The selection of the European Green Capital 2025 is based on seven environmental indicators. These indicators are outlined below, and a copy of the 2025 EGCA Application Form is attached in Appendix A:

1. Air Quality
2. Water
3. Biodiversity, Green Areas and Sustainable Land Use
4. Waste and Circular Economy
5. Noise
6. Climate Change Mitigation
7. Climate Change Adaptation

[2] Covenant of Mayors: https://www.covenantofmayors.eu/
[3] Green City Accord: http://www.greencityaccord.eu/
[4] EU Missions 100 climate-neutral and smart cities: https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/ec_rtd_he-cities-mission-reveal-factsheet.pdf

Each environmental indicator composed of the following sections:

A. Present Situation (weighing factor 50%)
B. Past Performance (weighing factor 25%)
C. Future Plans (weighing factor 25%)

The technical assessment procedure involves a thorough evaluation of the application form submitted by every applicant city. This assessment is complemented by an analysis of relevant data sourced from the European Environmental Agency. All seven environmental indicators carry equal weight in the evaluation process. The sub section weighing (A,B,C) differs, see above.

2.3 Technical Assessment Experts Panel

The Technical Assessment Panel consists of seven independent Experts. A shortlist of the experts per indicator and their titles are included in Table 2.3. A more elaborate profile for each of the Experts can be found in Appendix B.

It is important to emphasize that a peer review was conducted as an integral component of the technical assessment process. Each member of the Expert Panel evaluated their designated primary indicator, and in addition, each indicator underwent evaluation by a secondary panel member, acting as a peer reviewer.

Table 2.3 - Expert Technical Assessment Panel

	Indicator	Expert	Title
1	Air Quality	Michel André	Senior Researcher, Transports and Air pollution, Gustave Eiffel University, France
2	Water	Wieslaw Fialkiewicz	Assistant professor, Wroclaw University of Environmental and Life Sciences, Poland and head of Hydrodynamics Modelling Section, Institute of Environmental Engineering
3	Biodiversity, Green Areas and Sustainable Land Use	Daniele La Rosa	Associate professor of Urban and Environmental planning, Department of Civil Engineering and Architecture, University of Catania, Italy
4	Waste and Circular Economy	Katia Lasaridi	Professor in Environmental Management and Technology, School of Environment, Geography and Applied Economics, Harokopio University, Athens, Greece
5	Noise	Sergio Luzzi	President and Technical Director of "Vie en.ro.se. Ingegneria", certified company of acoustic consultancy and design in Italy and Adjunct Professor at the University of Florence
6	Climate Change Mitigation	Anna Ternell	Project manager at the Research Institute of Sweden (RISE) and Ph.D. Research Fellow in Geography, University of Pecs, Hungary
7	Climate Change Adaptation	Niki Frantzeskaki	Chair Professor in Urban and Metropolitan Planning and Governance, Utrecht University, Faculty of Geosciences, Department of Human Geography and Spatial Planning, The Netherlands

3. Technical Assessment Brescia

3.1 Air Quality

A. Present Situation

Located in the Po Valley, Brescia faces severe air pollution problems in winter due to thermal inversion. The number of days exceeding the daily limit value of PM_{10} was higher in 2022 than the maximum 35 days allowed by the European Air Quality Directive, i.e., around 50 days. The annual mean concentrations of PM_{10} reported by the five monitoring stations were below the European limit value. Furthermore, the annual mean concentrations of $PM_{2.5}$ and NO_2 were close to or above the European limit values. A source allocation study indicates; however, that the City of Brescia is only responsible for 7% of the PM_{10} concentrations and 20% of the NO_2 concentrations with the remaining part allocated to the agglomeration and the region.

Due to the exceedances of PM_{10} there is an ongoing air quality infringement procedure concerning Brescia. These instances of high pollution are primarily attributed to unfavourable topographical and meteorological conditions, as well as regional-scale pollution. In addition, Brescia demonstrates that it is fully aware of these air quality issues and takes them seriously. Transitioning to sustainable transport and improving energy efficiency are the key steps Brescia needs to take. This is addressed within the regional air quality plan for the Lombardy region, which focuses on energy efficiency, transport, domestic heating with wood biomass and agriculture. Brescia has installed two weather stations to monitor and signal the problematic weather conditions in terms of air quality. Furthermore, citizens are informed through online air quality data and the "ariabene comune observatory", which disseminates good practices. With these actions the city can play a leading role for the whole agglomeration to improve the air quality.

B. Past Performance

Annual concentrations of NO_2, PM_{10}, and $PM_{2.5}$ in Brescia have consistently decreased in recent years and are now below the European limit values. However, the number of daily exceedances for PM_{10} still remains above the limit. These positive developments can be attributed to various measures, primarily focused on the energy system. Measures include the expansion of the district heating network, the development of cogeneration and waste-to-energy plants, the recovery of thermal waste, and efforts to reduce energy consumption and combustion emissions. As a result, there have been significant reductions of 70% to 90% in NO_x, PM, and SO_x emissions from 2005 to 2017.

Another significant area of focus for Brescia has been mobility, with the implementation of a Sustainable Urban Mobility Plan. This plan has led to the development of a subway system, improvements to the railway network, and an overall increase of 40% in the number of passengers using public transportation. Additionally, efforts have been made to introduce methane-powered buses and promote bicycle and pedestrian-friendly policies.

C. Future Plans

Brescia aims to reduce $PM_{2.5}$ and NO_2 pollution and to achieve the European Zero Pollution objectives. To accomplish this, the city has established an interconnected approach that combines the Climate Transition Strategy (CTS), the Sustainable Energy and Climate Plan (SECAP), and the Sustainable Urban Mobility Plan (SUMP).

Efforts in the energy sector will focus on further expanding the district heating network, promoting cogeneration, and harnessing renewable energy sources. In terms of transportation, significant efforts will be made to enhance public transport in Brescia. This includes extending the subway system, introducing two new tram lines and a high-capacity bus line, quadrupling the railway tracks and electrifying the bus fleet. Brescia is also planning promising initiatives such as improving urban freight logistics, upgrading the entire urban street network to be more bicycle-friendly, and introducing a "mobility credits" system to encourage sustainable modes of transportation. Most of these measures are accompanied by dedicated budgets.

Furthermore, Brescia has outlined various industrial projects within its A2A Strategic Plan. These projects involve the development of hydrogen technologies, as well as initiatives focused on heat and gas recovery, and the production of bio-methane from agricultural and food waste.

While the report does not provide specific information on the resolution of air quality infringement procedures in the Lombardy region, it is expected that the measures implemented by Brescia will significantly contribute to achieving this objective. However, more details regarding budget allocations on a greater range of interventions and their specific impacts on various pollution components would have been welcomed.

3.2 Water

A. Present Situation

The quality of drinking water in Brescia meets the requirements set by the European Drinking Water Directive, with no reported exceedance of monitored parameters. To ensure the quality of drinking water, an initiative has been established to monitor and reduce Chromium levels, even though they are currently below the legal limit.

Various activities have been launched by Brescia to promote responsible water usage. This has resulted in a slight decrease in overall water consumption over the past three years. Furthermore, there has been a continuous reduction in water losses, which reached 27.9% in 2020. In terms of the ecological status of surface water bodies, observations made in 2019 indicate that it ranges from good to poor. The chemical status of surface groundwater bodies was sufficient in 2019 but not sufficient for the intermediate and deep groundwater bodies.

The wastewater treatment plant (WWTP) fully complies with the requirements of the European Urban Waste Water Treatment Directive (UWWTD) due to advanced tertiary treatment methods. Additionally, the sludge produced during the treatment process is utilized to generate electricity and hot water, supplying the city's district heating network. However, no information was provided regarding the treatment of wastewater not connected to the wastewater collection system, nor were any measures mentioned regarding the reduction of greenhouse gas emissions.

B. Past Performance

The water consumption of Brescia has decreased significantly over the past decade. However, an explanation for the sudden decline in water consumption in 2017 would have been welcomed. Brescia has implemented several initiatives to reduce water loss through leakages, including the implementation of district metering, the establishment of a real-time sensor network, and extensive replacement projects. These efforts have led to a substantial reduction in water loss.

In the past eight years, the wastewater network has been expanded with 10 kilometres of pipelines. As a result, the network now collects 95.65% of the sewage produced. To enhance the treatment process and energy efficiency, the Verziano wastewater treatment plant has been equipped with a membrane bioreactor.

Furthermore, the rehabilitation of surface water areas that were previously occupied by gravel excavation was successfully completed in 2021. This endeavour aimed to restore these areas to their natural state and ensure their environmental sustainability.

While the application provides information about the actions and measures taken by the city authorities over the last decade, it lacks details regarding stormwater management.

C. Future Plans

Brescia has clearly defined objectives to save drinking water, although specific timelines for each objective have not been established. A comprehensive plan for the modernization of the WWTP is presented. This plan focusses on increasing its capacity by 2045, reusing water in agriculture, increasing energy self-sufficiency, and generating renewable energy from dried sludge.

Furthermore, an additional inter-municipal sewage treatment plant has been proposed to improve the water quality of the primary stream that runs through the city of Brescia. To address the main sources of groundwater pollution, the Ministry of Environment has established the Brescia-Caffaro Polluted Site of National Interest, aimed at remediation efforts.

The Brescia agglomeration is subject to the European infringement procedure concerning areas that do not have adequate wastewater collection and treatment systems. The current state of the infringement procedure and its progress are adequately explained. The final steps to resolve the infringement are currently underway.

However, the application lacks sufficient information regarding strategic and policy commitments, budget allocations, resource management, plans for impact monitoring, and participatory approaches.

3.3 Biodiversity, Green Areas and Sustainable Land Use

A. Present Situation

Brescia demonstrates a strong commitment to enhance biodiversity in the city through the implementation of strategic planning tools that align with international policies and standards. A key focus is on addressing soil de-sealing as part of the Climate Transition Strategy, which is particularly important given the city's high level of urbanization.

Although there are no Natura 2000 sites within the city itself, two special areas for conservation are located in close proximity. Additionally, the municipality encompasses regional and supra-municipal parks. Access to urban and suburban green areas is facilitated through a comprehensive 230-kilometer cycling network and greenways.

The surface area of green areas, particularly public green spaces, is not clearly specified in the application. Information on the current amount of tree land cover is not provided and data on green areas is inconsistent Nonetheless, the connectivity map demonstrates a strong overall interconnection among various green elements in the city.

Biodiversity monitoring programs are managed by the university and a local museum rather than directly by the city. Notably, citizen science is actively utilized as a complementary approach to monitor biodiversity. Citizen science initiatives are promoted through an international platform.

B. Past Performance

The most significant accomplishment of Brescia regarding green spaces was the establishment of supra-municipal parks in 2012 and 2018, resulting in a 17% increase in the total protected areas. However, it is unclear how much of the new protected areas fall within the Brescia municipality since they also encompass neighbouring municipalities. There is a budget allocated for conserving and restoring habitats within these parks. Although the application highlights the status of key habitats, it does not provide specific data on their trends over time.

To prevent further urban sprawl, urban development has been restricted to designated areas outlined in the strategic urban plan since 2002. The plan includes guidelines for new urban transformations. In the past year, the extent of brownfield sites has decreased due to successful regeneration projects focused on industrial and military areas. While exact figures are not provided, a map displaying their locations is presented.

The historical progress of the city in terms of restoration and greening initiatives is well presented. The three-year monitoring and evaluation period reflects Brescia's commendable urban biodiversity planning practices. Furthermore, the mapping of biodiversity status according to European Union policies demonstrates the city's commitment and proficiency in evaluating and planning for biodiversity conservation.

C. Future Plans

The new strategic urban plan of Brescia aims to preserve and expand existing green areas while limiting further land development. It includes incentives for regeneration and redevelopment of urban spaces. The recently introduced building regulations document incorporates specific binding provisions for ensuring environmental sustainability in urban transformations.

Although the application mentions objectives of enhancing biodiversity, the proposed activities are stated in general terms. Over the next two years, Brescia plans to plant more than 50,000 trees and shrubs to reforest peri-urban areas. Additionally, studies are planned to identify potential conservation areas. Pilot sites will be established to test sustainable management practices for forests and green spaces.

The budget allocated by National Ministries will be allocated to define and establish public green areas and biodiversity initiatives. Furthermore, both public and private economic resources will be made available next year to support projects focused on climate change adaptation and mitigation. These projects may involve actions such as de-sealing, implementing green roofs, mitigating infrastructure, and developing sustainable drainage systems. However, the level of public involvement in these initiatives has not been addressed in the application.

The described actions not only demonstrate innovative policy and planning initiatives but also reflect a commitment to the latest best practices. They encompass initiatives to reintroduce nature and strategic restoration efforts in undeveloped areas. The presented actions offer detailed information regarding the allocated budget and the stakeholders involved in their realization and implementation.

3.4 Waste & Circular Economy

A. Present Situation

Brescia has benefited from the overall positive advancements in source separation and recycling across Italy, particularly in the northern region. Building upon the successful national policies, legislation, and investments in waste management, the city has made significant progress, yielding notable results. Notably, Brescia has achieved a zero-waste-to-landfill status, with a relatively low incineration rate of 17.4% and an impressive recycling rate of 82.6%.

Furthermore, Brescia has implemented separate collection systems for all waste streams with commendable per capita performance. The city has developed an extensive network for collecting biowaste, employing a combination of conditional access bins and door-to-door collection for dry recyclables. Efforts have also been made to reduce plastic waste, redistribute food surplus, and promote the reuse of various materials. Brescia has also implemented a pay-as-you-throw (PAYT) system, although specific details regarding its population coverage are not provided. Additionally, the city has been recognized for its Green Public Procurement system, which received a regional award in 2008.

B. Past Performance

Brescia has implemented an integrated waste management approach with specific targets since the early 1990s. At the core of this approach was the establishment of a Waste-to-Energy (WtE) facility, which was accompanied by an ambitious goal of achieving 36% separate waste collection, which was reached in 2001. In 2016, the city introduced a widespread door-to-door collection system with Pay-As-You-Throw (PAYT) pricing. This initiative resulted in a significant decrease in per capita waste production, decreasing from 733 to 573 kilograms per capita per year. Furthermore, the percentage of separate waste collection has increased significantly and now exceeds 70%. The collected materials, including biowaste, are processed at dedicated local facilities operated by the waste management provider, ensuring high recovery rates.

Throughout this process, effective dialogue with all stakeholders has been established. The creation of an observatory has also been instrumental in informing citizens about the potential environmental and health effects of the waste-to-energy plant in the surrounding area.

Overall, Brescia's waste management system has made significant progress in reducing total waste and enhancing the collection of both mixed and source-separated waste, in line with European policies and targets.

C. Future Plans

The city's waste management system is overseen by both a technical and an institutional forum, which also establish future plans and objectives. The primary goals mentioned focus on enhancing separate waste collection, implementing "smart" collection bins, optimizing the points-based pricing system, strengthening recycling and reuse centers, increasing citizen participation, and combatting illegal dumping. The city's Climate Emergency Plan includes general statements about reducing single-use plastics and food waste, but specific targets for these measures are not provided. Plans of the waste provider, A2A, to improve the energy efficiency of the Waste-to-Energy (WtE) plant by producing biomethane and hydrogen are mentioned in the application, but investment or other details are not presented.

Overall, there is a lack of clarity regarding the specific targets and timeline for achieving the defined objectives. Additionally, information about the means of support for the planned measures and ambitions is absent.

3.5 Noise

A. Present Situation

A substantial portion of the population is exposed to total noise values above 55 dB(A) during both daytime and nighttime, surpassing national limits. The primary sources of noise originate from the dense transportation infrastructure, including planes and municipal roads, and the industrial and commercial activities near residential areas. As an urban agglomeration, the municipality of Brescia has formulated and submitted a Strategic Noise Map (last updated in 2022) and Action Plan (last revised in 2018) to the EU. The provided data includes information on the population exposed to noise levels exceeding established thresholds, distinguishing different noise sources.

The municipality has implemented various measures to address the issue of noise pollution, focusing on sustainable mobility initiatives including the introduction of an automated subway system, the adoption of methane-powered buses, and the redevelopment of railways, among others. The promotion of active mobility has also been prioritized, encompassing the improvement of bicycle path networks, bike sharing programs, the provision of bike parking facilities, and the creation of pedestrian-friendly zones. In terms of designated quiet areas, the municipality recently identified three specific locations; however, the majority of the population in Brescia does not reside near (within 300 m of) these quiet zones.

Efforts have been made to keep stakeholders informed and raise awareness regarding noise issues through the Municipality's website and the regularly updated Report on the State of the Environment.

B. Past Performance

In the period between 2017 and 2022, a decrease is observed in the number of individuals belonging to exposure classes with higher noise levels. During a period of seven years (2012-2019), there was an increase of 40% in the number of people using public transport. It is worth noting that the data specifically pertains to the city of Brescia and not Italy as a whole, as erroneously reported. However, the application does not provide details on the specific benefits brought about by each of the implemented measures.

The Municipality of Brescia has demonstrated its commitment to addressing noise-related issues by adopting several plans and official documents. These initiatives reflect the municipality's genuine interest in addressing noise-related concerns. In response to numerous requests from concerned citizens regarding noise pollution originating from two steel mills, the municipality has taken action by establishing two observatories. The activities carried out by these observatories are regularly documented and made available to the public online.

C. Future Plans

The municipality of Brescia will continue implementing measures to reduce road traffic and address noise-related issues as outlined in the updated Noise Action Plan scheduled for delivery in April 2024. These measures will primarily focus on promoting sustainable and active mobility. Another project, funded by internal municipality funds, aims to create sound-absorbing surfaces at the subway. Regarding quiet areas, Brescia has acknowledged that their identification is essential. However, no specific measures have been indicated in Brescia's application for their implementation. The observatories near the steel mills will continue their activities, in line with the watchmen's initiative, to engage stakeholders and monitor the situation.

In light of a recent ruling by the Supreme Court of Cassation, which held the municipality of Brescia responsible for noise disturbances affecting citizens, particular attention must be given to controlling and regulating leisure noise. To further enhance noise reduction efforts, Brescia could explore additional approaches. One recommendation is to invest in noise barriers and soundproofing measures in residential areas near transportation infrastructure and industrial sites. Moreover, the municipality could consider the implementation of smart city technologies, such as real-time noise monitoring systems, to identify and address noise hotspots effectively. This data-driven approach could optimize resource allocation and ensure the implementation of efficient noise reduction measures.

3.6 Climate Change: Mitigation

A. Present Situation

Brescia demonstrates a strong commitment to climate mitigation. The city's dedication is evident in its participation in the Covenant of Mayors for Climate and Energy 2030 and the development of a comprehensive Sustainable Energy and Climate Action Plan (SECAP).

The application does not explicitly mention regular monitoring and reporting of the implemented actions outlined in the Mitigation Plan and SECAP. Brescia should consider this aspect to better assess progress, identify areas for improvement, and ensure accountability in achieving emission reduction targets.

It is regrettable that the breakdown by energy source is not provided. Additionally, while the organizational aspects of energy are well described, it is essential to address the connections with the private sector, businesses, and citizens. On a positive note, the "Observatories" for main industrial plants seem to be an interesting and commendable initiative with a participatory approach, offering a potential avenue for further progress. Overall, Brescia serves as an inspiring example of climate action, and its efforts can serve as valuable lessons for other cities seeking to address climate change and work towards a more sustainable future.

B. Past Performance

Brescia has developed a Strategic Urban Plan, SECAP, SEAP, and Climate Transition Strategy, all of which demonstrate the city's strong commitment to improving energy efficiency and reduce carbon emissions. Over the past decade, Brescia has successfully implemented several strategies and plans aimed at addressing climate change and promoting sustainable development.

Notable achievements include a reduction in public lighting-related CO2 emissions, successful efforts to decarbonize energy production, and the implementation of sustainable mobility initiatives. Although some benefits of the extensive energy conversion measures, the district heating network, and the development of a metro and rail network may not be fully effective yet, these concrete measures hold great potential for reducing energy consumption and CO2 emissions in the future.

Brescia's efforts in sustainable mobility plans are commendable, including expanding the subway line, constructing new tram lines, and electrifying the bus fleet. Nevertheless, the city could further prioritize electric mobility by establishing a comprehensive recharging network, promoting the use of electric vehicles, and actively supporting the transition to zero-emission transport.

There has been an increase in CO2 emissions between 2010 and 2018, primarily driven by indirect emissions from the production sector. This highlights the need to focus on tackling emissions associated with increased production volumes. Brescia should prioritize addressing emissions from industrial sectors and explore ways to decouple emissions from production growth.

C. Future Plans

Brescia's future plans for climate mitigation, which are in alignment with the European goals, demonstrate a comprehensive approach that includes both reducing energy consumption and increasing renewable energy sources (RES). The target of covering 100% of public lighting and 26% of municipal services with RES by 2030 shows a strong commitment to transitioning to clean energy.

The actions and measures that Brescia intends to take to achieve the objectives are described in detail, and they were also mentioned in relation to their expected benefits for air quality. Additionally, certain actions are associated with provisional budgets.

While Brescia has outlined ambitious goals for the public transport sector, more emphasis could be placed on promoting active transport modes such as walking and cycling. Encouraging a shift towards sustainable and active mobility can further reduce emissions.

Brescia's partnership with A2A in initiatives like the Hydrogen Valley project and the efficiency improvement of the waste-to-energy plant is commendable. However, there could be more emphasis on fostering community engagement and awareness regarding these projects. Implementing effective communication strategies and involving citizens in the transition to cleaner energy can enhance support and encourage active participation.

3.7 Climate Change: Adaptation

A. Present Situation

The city of Brescia demonstrates a commendable understanding of climate challenges, along with a well-structured planning effort to address climate change. Their approach integrates objectives for flood resilience (known as the "sponge city" concept), biodiversity and heat stress management (referred to as the "oasis city" concept) and creating a comfortable environment for its residents (the "city for people" concept). While the main climate impacts are identified and effectively presented with quantitative data and maps, it is not explicitly stated whether an official assessment of climate risks and vulnerability is currently available.

The current implementation of the climate change strategy appears to be efficiently managed, employing a participatory and collaborative governance approach. This approach aims to foster co-governance and shared responsibility among stakeholders; however, the report lacks information regarding the involvement of stakeholders in decision-making processes.

The city has approved two critical instruments for climate change adaptation, the Strategic Urban Plan and Climate Transition Strategy. These strategies include pertinent pilot actions, such as the implementation of green roofs, de-sealing initiatives, and urban forestation projects. Additionally, the Climate Transition Strategy is supported by a periodic monitoring system to ensure its effectiveness. Brescia has also secured funding for various research projects at the national and European levels, which are actively being implemented to further address climate issues.

Overall, Brescia showcases a comprehensive and well-managed approach to climate change. As the city continues to implement its proposed measures, it would benefit from connecting them with specific indicators and targets related to climate adaptation, both for the current situation and the expected changes with the proposed strategy.

B. Past Performance

The application provides a comprehensive historical context of Brescia, complete with maps, comparative data, and an explanation of the historical development trends. A heat stress map would be helpful to identify vulnerable areas and to compare them with the green spaces in the city.

Recent trends concerning climate change vulnerability and risks are thoroughly presented, offering a clear picture of the current the situation.

Furthermore, the initiatives and actions taken to address flood risk, fire risk, and heatwaves are extensively covered and supported with quantitative data, underscoring the city's commitment to long-term solutions.

C. Future Plans

Brescia has proposed ambitious climate policy plans aimed at addressing climate drivers and enhancing climate resilience. Since these plans are still ongoing and relatively recent, it is challenging to determine their effectiveness at this stage. Nevertheless, it is suggested that every adaptation and mitigation target is complemented with specific information about the measures to be taken, including their location, responsible parties, and timelines for implementation. While an illustrative example of this information is presented, the adaptation measures are not connected with the communicated targets to assess their viability in terms of potential policy outcomes. More information on the systematic climate risks and vulnerabilities assessment would have been welcomed, including information about involvement of stakeholders who will share co-responsibility.

As previously mentioned, the city has two critical planning and policy instruments, namely the Strategic Urban Plan and Climate Transition Strategy, which are expected to play a pivotal role in achieving the climate adaptation objectives set for 2030 and 2050. The application convincingly demonstrates the city's strong political commitment to these goals, and it provides precise budget allocations for various actions.

Detail regarding how different stakeholders will be involved in the decision-making process is lacking. Addressing this aspect would further enhance the effectiveness of the proposed climate policy plans.