

Survey Report

1 Introduction

- Brief overview of the territory/region
- Main environmental challenges in the region *as they emerge from bibliography, reports from regional and national institutions.

The territory of the City of Niš encompasses 597 km² in southeastern Serbia, strategically positioned in the Niš Basin. This location is defined by the confluence of the Nišava and Južna Morava rivers, which historically established Niš as a major transport and communications hub, often referred to as "the gateway between the East and the West." The city serves as the crucial administrative, economic, and cultural center of the Nišava District. The relief is geomorphologically diverse, featuring flat, fertile alluvial plains along the rivers in the central area, which are critical for intensive agriculture and viticulture. These plains are bordered by distinct hilly-mountainous terrain, including the slopes of Svrliške Planine to the north and Suva Planina to the south, contributing to the region's varied climate and biodiversity.

Administratively, the City of Niš is divided into five constituent urban municipalities: the central core of Medijana, and the adjacent municipalities of Palilula, Crveni Krst, Pantelej, and Niška Banja. Niška Banja is particularly notable for its geothermal springs and established spa tourism. Medijana is geographically small (approx. 10.78 km²), but highly urban and densely populated (population of 85,969 in the 2011 census), making it an administrative and commercial focal point. The area is historically significant as the site of the ancient Roman city of Naissus, the birthplace of Emperor Constantine the Great. The municipality is named after the important Roman imperial residence palace, Mediana, which is a key archaeological and cultural site.

Niš, and by extension its central municipality Medijana, faces several major environmental challenges common to large, rapidly urbanizing Serbian cities, primarily relating to land management, water pollution, and climate change-induced hazards:

- *Air pollution in Niš City is a severe environmental challenge, primarily driven by high concentrations of particulate matter (PM2.5 and PM10), especially during winter. The main source is residential heating, where a significant portion of the population relies on outdated stoves burning solid fuels like low-quality coal and wood. This problem is severely worsened by the city's location in the Niš Basin, which is prone to temperature inversions that trap cold air and pollutants close to the ground, leading to intense smog. Secondary sources include the aging vehicle fleet, which emits high levels of Nitrogen Oxides (NOx), and some industrial boiler houses, all contributing to air quality levels that frequently exceed safe limits and pose significant public health risks.*
- *Soil Degradation and Contamination: Agricultural land, a valuable resource, is threatened by degradation mechanisms such as water and wind erosion, and fertility loss. A serious challenge is the conversion of fertile agricultural land for*

urban expansion and construction, leading to a permanent loss of productive capacity. Furthermore, the area experiences significant soil chemical pollution (frequently exceeding limits for nickel, copper, and zinc) and contamination from a non-sanitary landfill, which affects approximately 300 hectares of land due to rising groundwater levels.

- *Water and Sanitation Issues: The City of Niš critically lacks adequate wastewater treatment facilities, resulting in the discharge of household wastewater directly into local waterways without treatment. This, along with limited industrial wastewater treatment and the absence of a separate stormwater collection system, poses serious environmental and public health risks, contaminating surface and groundwater and worsening water quality, particularly when reduced river flow limits the water's natural dilution capacity.*
- *Forests, Green Space, and Climate Hazards: The urban core suffers from an acute lack of public green spaces and an uneven distribution of forest areas, limiting the city's ability to improve air quality. Existing forests face degradation from uncontrolled logging, illegal construction, and are highly vulnerable to wildfire due to climate pressure and accumulated dry biomass. The region is also increasingly exposed to climate hazards, including rising risks of pluvial floods (due to intense rainfall exceeding the capacity of the urban drainage system) and intense soil erosion in hilly areas like Suva Planina.*
- *Climate change and extreme weather: there is a rise of the average temperature which leads to snowless winters and summer heatwaves, magnified in the urban heat islands which are present especially in Medijana due to urban density and limited greenery. Occasional flooding from the Nišava River are prevented by the defensive embankments along the river banks. exacerbated by poor drainage and land use*

2 Profile of the survey participants

Write in brief General Business Characteristics, including the following:

- *Business types represented (hotel, restaurant, travel agency, etc.)*
- *Legal status (public/private/NGO)*
- *Size of businesses (number of employees)*
- *Years of operation*
- *Location characteristics (urban, coastal, protected area, cultural site)*

Geographically, the population covers the administrative area of the city of Niš, characterized by growing tourism activity, significant natural resources, climatic specificities, and increasing pressure from climate change.

The population covered by this research includes all organizations operating within the tourism, hospitality, and cultural sectors of Niš central municipality Medijana, whose activities directly or indirectly affect environmental quality or are exposed to climate risks specific to this region. These organizations represent key actors in the green transition in tourism, as they manage resources, provide services to visitor groups, and play a role in preserving natural and cultural heritage.

The population encompasses a wide range of actors, among which the following stand out:

- *Hotels and accommodation facilities (including traditional hotels, small family-run guesthouses, private accommodation, and short-term Airbnb rentals),*
- *Restaurants, cafés, and hospitality establishments,*
- *Travel agencies and tour operators,*
- *Supporting organizations that contribute to the tourism sector in various ways.*

All businesses covered by the survey are privately owned, except for one, which is publicly owned. The surveyed entities are predominantly small enterprises. The average number of employees is approximately 11.7, but the median is lower, at 7 employees. This indicates that the distribution is not symmetrical and that a few larger companies (with up to 78 employees) raise the average, while the majority of respondents are micro or small-sized enterprises. Micro and small enterprises dominate: as many as 85% of respondents have no more than 20 employees (1–20). Only 15% have more than 20 employees. The only public entity in the sample (the Museum of Church Artifacts) has only 3 employees.

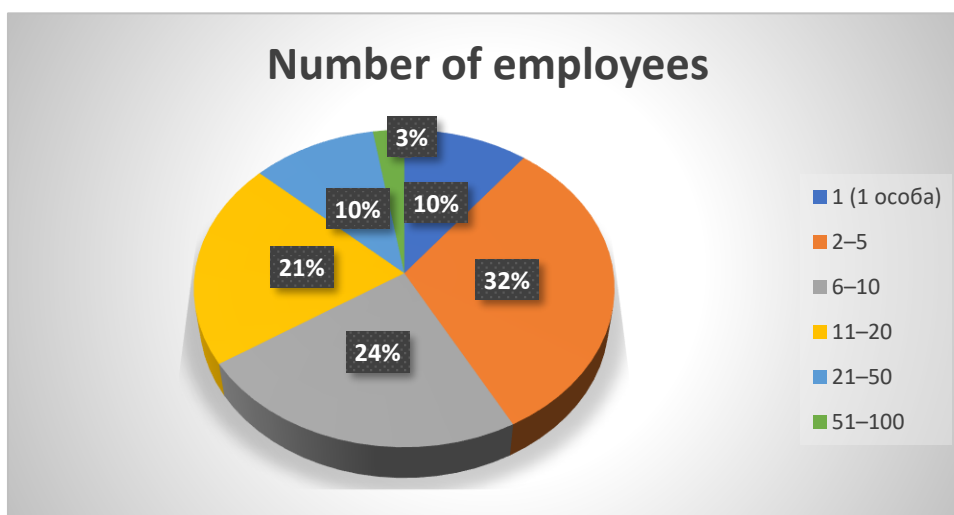


Figure 1. Number of employees in organizations covered by the research

The average operating duration of the surveyed businesses is approximately 13.8 years, while the median is 9–10 years. In this case as well, there is a certain degree of variability (standard deviation of 12.17), indicating a mix of businesses: from relatively new enterprises (minimum 2 years) to long-established ones (maximum 64 years).

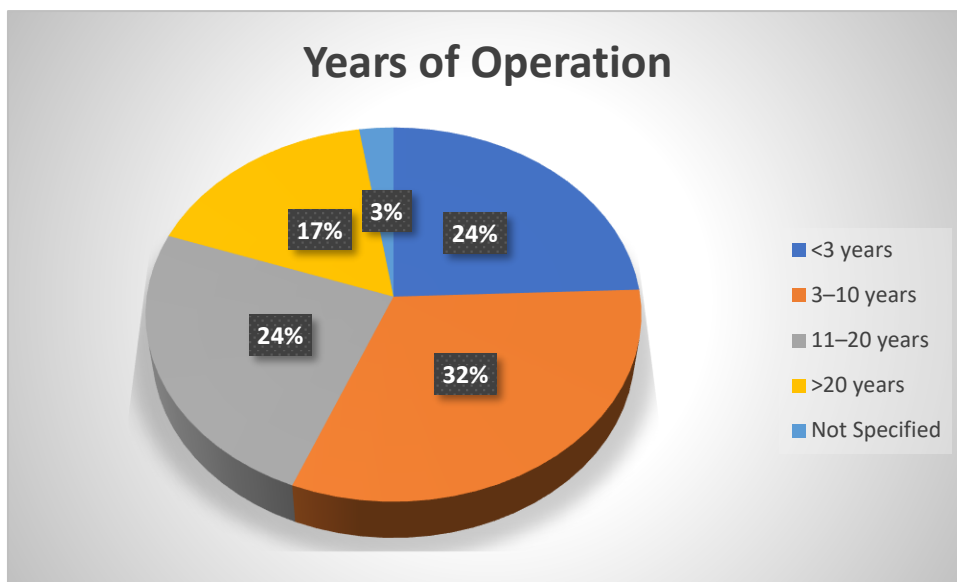


Figure 2. Years of operation of organizations covered by the research

The vast majority of businesses (85%) do not operate within the territory of a protected natural or cultural site. Only 15% of surveyed companies carry out their activities in such areas, which may affect their obligations regarding environmental management.

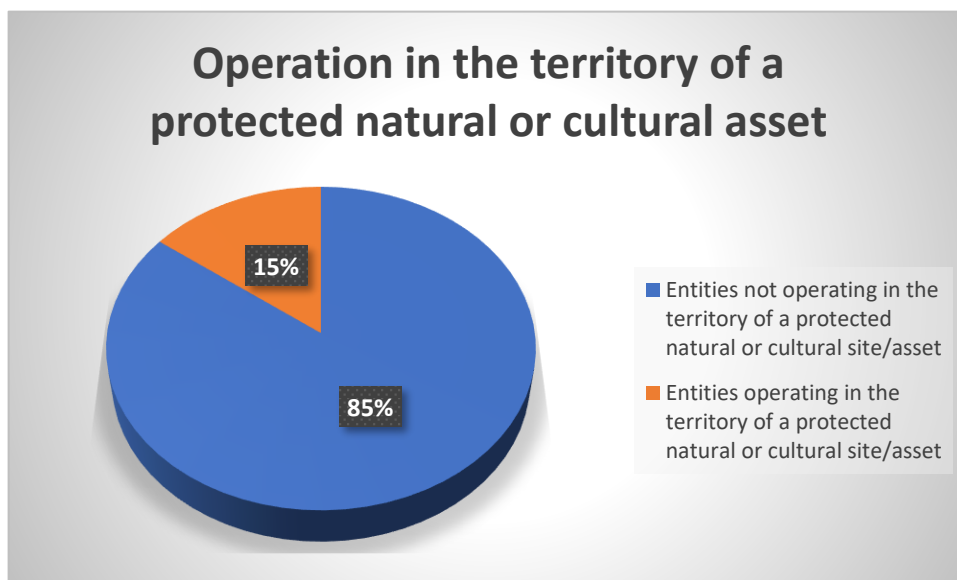


Figure 3. Business operations within the territory of a protected natural or cultural site

The main clientele of the enterprises in the sample is almost evenly divided between domestic tourists (50%) and businesses that have a balanced mix of domestic and foreign guests (47%). Only one respondent (an Airbnb accommodation) has foreigners as the dominant group. About half of the sample depends to some extent on foreign tourists, indicating the importance of the international market for larger and more specialized tourism establishments in in the municipality of Medijana, and more broadly, across the entire city of Niš. The smallest share, only 3% (one respondent), identifies foreign tourists as their main clientele. This distribution indicates a predominant business strategy aimed at maintaining stability by relying on domestic resources or diversifying risk through balance.

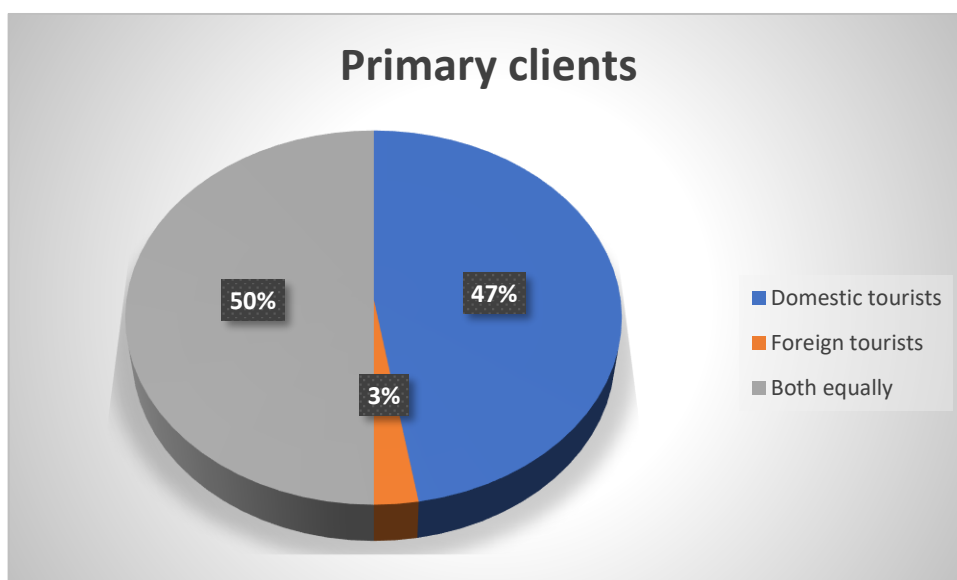


Figure 4. Predominant guest structure

Almost three-quarters of the surveyed businesses, specifically 71%, identified as belonging to the Restaurant/Café (Hospitality) category. This high concentration suggests that the sample is predominantly composed of micro and small enterprises directly linked to food and beverage services, significantly shaping the context of the overall research. Other market segments are relatively underrepresented. The accommodation sector, which includes hotels/accommodation (12%) and rental services via platforms such as Airbnb (3%), together accounts for about 15% of the sample. Travel organizers (travel agencies), museums and guiding services make up the remainder, at 10% and 3%, respectively.

A notable finding is the prevailing lack of formal partnerships with relevant local actors in nature protection, local organizations, and authorities, indicating that potential synergies in environmental management are underutilized. As many as 78% of surveyed businesses reported that they do not engage in partnerships with local organizations or

authorities responsible for nature protection. This finding points to a significant gap in institutional collaboration regarding environmental sustainability. The vast majority of businesses clearly operate independently in the domain of environmental practices, without formal reliance on local expert or regulatory entities.

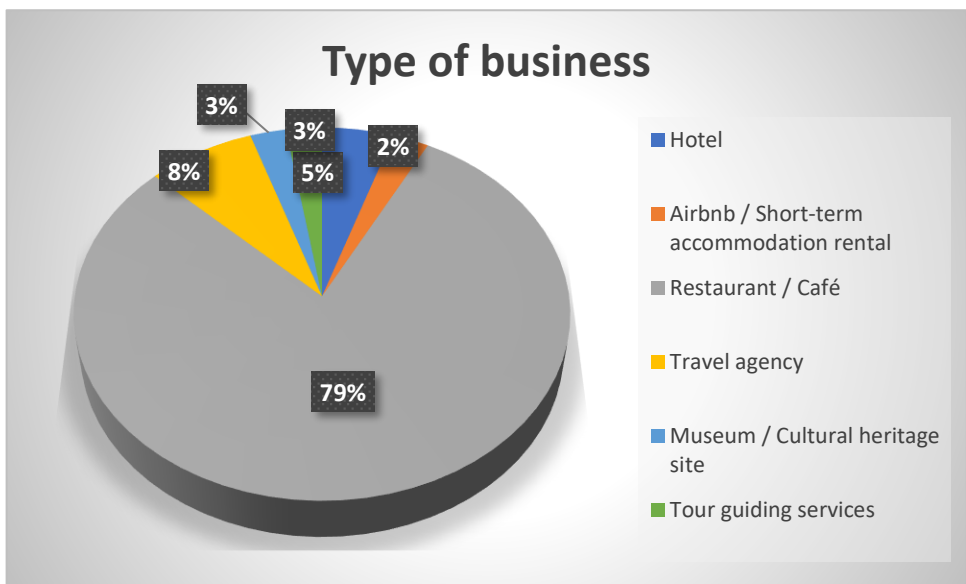


Figure 5. Type of Business

On the other hand, a minority of businesses, comprising 22% of respondents, confirmed the existence of such partnerships. Although this group is relatively small, its existence suggests that there is a portion of the market that recognizes the importance of coordinated action and collaboration with competent authorities for more effective implementation of nature protection and sustainable development measures.

Partnerships with local organizations/authorities for nature protection

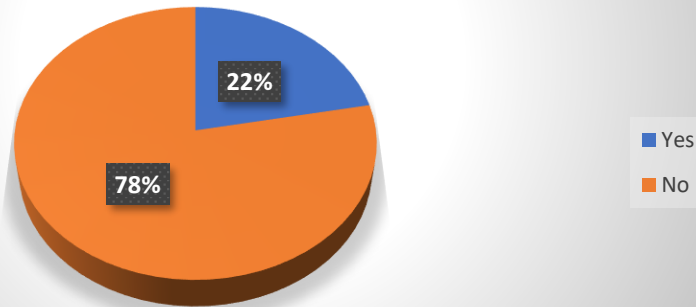


Figure 6. Partnerships with local organizations/authorities for nature protection

The dominant nature of the sample indicates that all results, especially those related to direct operational practices (e.g., waste management, resource consumption), will reflect the perspective of small and medium-sized hospitality establishments. This implies that the study's findings, particularly responses concerning environmental practices, are primarily specific to the food and beverage preparation and service sector.

Accommodation services (hotels, Airbnb) and travel agencies, although representing a relatively small share, are important for the analysis, as questions regarding water use efficiency, bed linen and towel management, and the energy efficiency of heating/cooling systems pertain to them. The role of travel agencies primarily relates to the promotion of environmentally friendly tours, rather than direct management of physical resources on site.

3 Industry-Specific Environmental Practices (Hotels, Restaurants, Travel Agencies, Museums)

- Write a Summary of practices adopted, with a comparison across business categories.
- Mention also General Environmental Practices as:
 - ✓ Energy monitoring and energy sources
 - ✓ Energy-saving measures
 - ✓ Water conservation practices and methods
 - ✓ Waste management and biodiversity-related actions
 - ✓ Employee environmental awareness training

The overall level of implementation of sustainable practices in the municipality of Medijana is currently moderate. There is a solid foundation (especially in local food sourcing and energy-efficient accommodation systems), but areas such as transport and food-waste reduction remain poorly developed. Guest education shows partial implementation, present in a majority of accommodation providers but still inconsistent across the tourism offer as a whole.

Businesses in municipality of Medijana (predominantly restaurants and cafés, with a smaller number of hotels, apartments, and tour operators, and one Airbnb) show a moderate but still insufficient level of adoption of sustainable practices in their direct work with guests and the tourism product itself.

The clear strongest point is local food and beverage sourcing: 87% of hospitality businesses already purchase ingredients from local producers. This is an important step towards reducing the carbon footprint and supporting the local economy, and it represents a strong base on which further progress can be built.

In the accommodation segment, all surveyed providers use energy-efficient heating and cooling systems, while two-thirds inform guests about sustainable practices. The reuse of towels and bed linen is likewise applied by two-thirds of providers, with the remaining one-third not yet implementing this measure.

When it comes to food offerings, the picture is balanced: slightly more than half of the establishments (52%) offer plant-based or explicitly eco-friendly menu options, while the rest do not yet do so. Food-waste management performs even worse – around one third (32 %) actively donate surplus food or compost it, meaning a large amount of edible waste still ends up in landfills.

Organized tourist transport shows a moderate level of sustainability: two of the three operators rely on low-emission or electric vehicles, while one continues to use conventional options. Guest education regarding the environmental impact of travel choices follows a similar pattern, with two operators actively providing such information and one not yet incorporating it into their service approach.

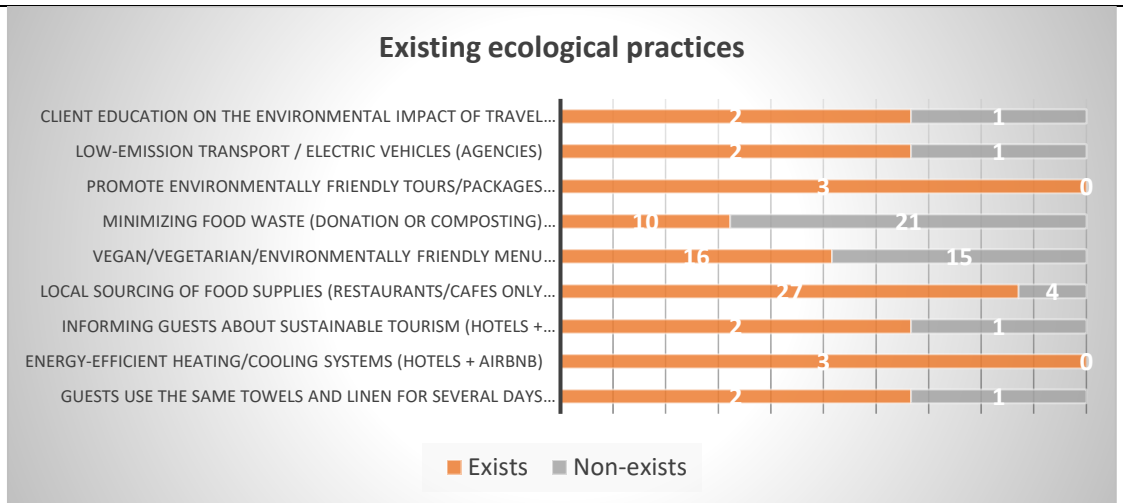


Figure 7. Existing environmental practices by business type

The research results show that basic efficiency measures have already been widely adopted:

- 97% of surveyed businesses in the hospitality and tourism sector already implement energy-saving measures (LED lighting, sensors, automatic switching off of lights and air conditioning).
- 67% apply water-saving measures (low-flow taps, devices, educating guests on reusing towels).
- 55% offer guests environmentally friendly alternatives (refillable bottles, biodegradable materials, reusable products).
- Only 47.5 % of hospitality and tourism businesses in Niš currently provide any kind of staff training on environmental awareness and sustainability.

These are exceptionally high percentages for southern Serbia and indicate that the first, easiest phase of the “green transition” has already been completed by the vast majority of businesses.

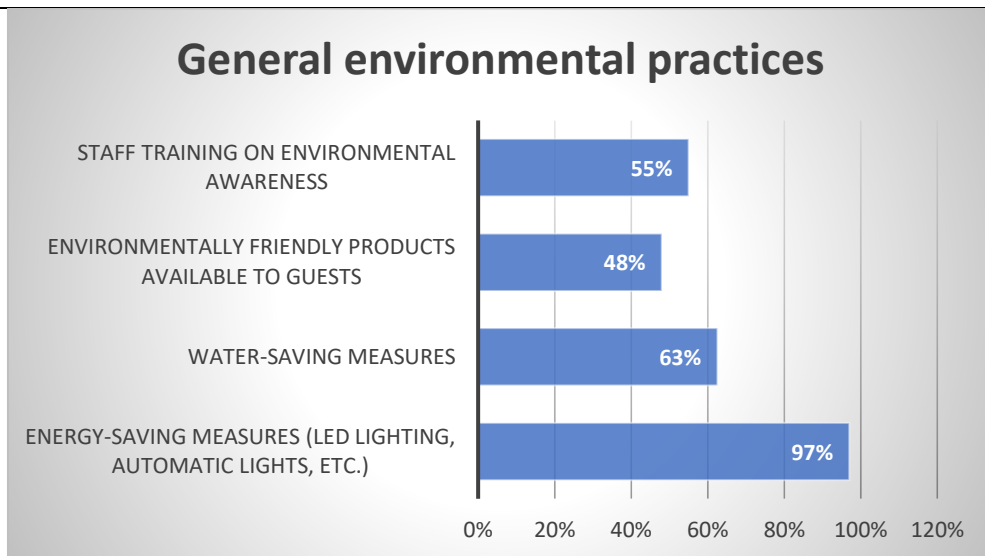


Figure 8. General environmental practices (cumulative, for all respondents)

Local food sourcing is the strongest sustainable practice in municipality of Medijana hospitality sector: 87 % of establishments report procuring at least part of their ingredients locally. This is a very positive result and shows clear support for the local economy and a lower transport-related carbon footprint.

However, only 32 % actively manage food waste (donation or composting) and only 48 % offer explicitly plant-based or environmentally friendly menu options.

The greatest challenge is indeed food waste management. A clear majority of respondents (68%) still do not donate surplus food or compost it. Given the volume of food prepared daily, this remains one of the most critical and impactful areas for immediate intervention – both environmentally and economically.

Despite the small sample, the accommodation sector demonstrates consistent energy efficiency, as all surveyed providers use efficient heating and cooling systems. Guest-focused practices such as multi-day towel and linen reuse are adopted by two of the three providers, and the same proportion offers information on sustainable tourism. These results indicate broadly similar behavior patterns across accommodation types, suggesting that improvements should be pursued through general guidance rather than type-specific interventions.

4 Impacts of Climate Change

- Write a summary by means of:

4.1 Types of climate impacts experienced

- Seasonal tourism disruptions
- Local environmental pressures (heatwaves, coastal erosion, etc.)
- infrastructure gaps (water shortages, road damage, electricity reliability, access to broadband)

4.2 Socioeconomic Consequences

- as competition over natural resources, air pollution, marine ecosystem degradation etc.

Types of climate impacts experienced

The analysis shows that the sector is facing serious and immediate challenges brought on by climate change, which are most evident through heatwaves and extreme weather events. Nearly half of surveyed businesses (47.5 %) confirm that their operations are already negatively affected by climate change. This is significantly higher than the regional average in many European countries and shows that climate change is no longer a distant threat, but a tangible day-to-day challenge for more than half of hospitality and tourism companies in municipality of Medijana. This level of vulnerability underlines the urgent need for targeted adaptation measures in the sector.

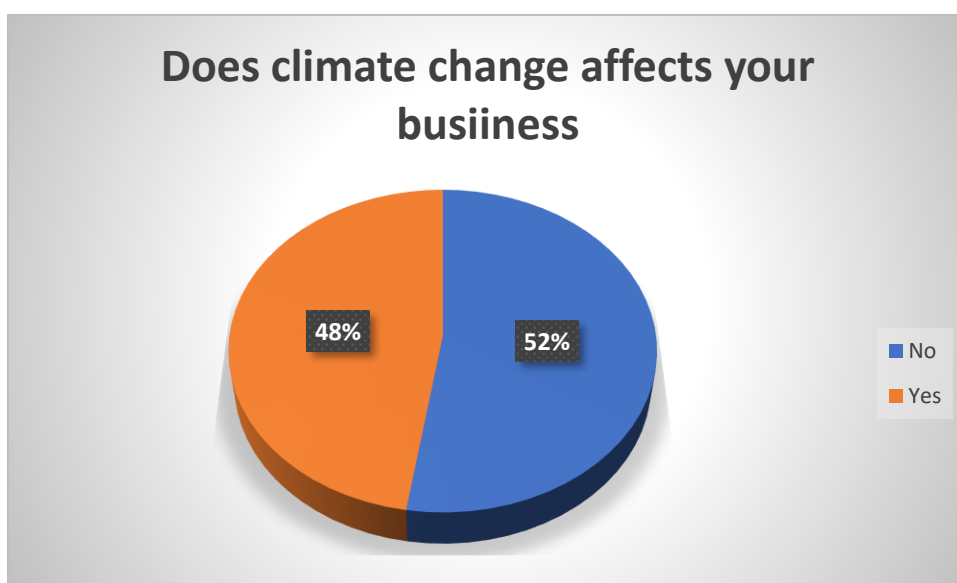


Figure 9. Climate change influence on businesses

There are notable differences in vulnerability to climate change across business types, with exposure rates ranging from 0% (e.g., museums and short-term rentals) to 100% (tour agencies and guides). Restaurants/cafés report a moderate 42% affected, placing them among the lower rates rather than the highest. Among impacted restaurants, rising temperatures is the most commonly cited effect, directly influencing air-conditioning demands, supply chains (e.g., local food storage), and operations (particularly for venues with outdoor seating). This variability underscores the need for sector-specific adaptation strategies in municipality of Medijana tourism and hospitality.

The dominant climate impacts felt by hospitality and tourism businesses are directly linked to rising temperatures: almost three-quarters (73.9 %) of affected respondents report higher average temperatures as the primary issue, followed by extreme weather events (52 %) and more frequent heatwaves (48 %). These changes are already driving up energy costs for cooling and threatening outdoor operations and guest comfort, confirming that temperature-related effects are the most immediate and widespread climate challenge for the sector.

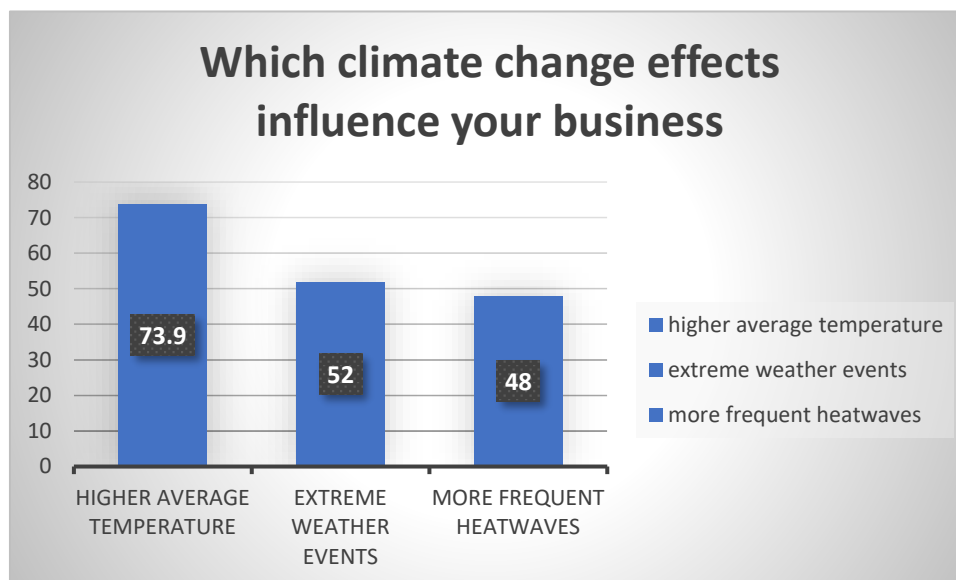


Figure 10. Climate change influence on businesses

Accommodation providers (hotels and short-term rentals) most frequently highlight changes in seasonal tourism patterns (2 out of 3 affected providers mention this impact). This is logical, since shifts in season length and intensity directly influence occupancy rates and annual revenue planning.

Restaurants and cafés primarily struggle with immediate physical and operational effects: rising average temperatures and extreme weather events — both cited by 54% of these establishments, followed closely by increased heatwaves (46%).

These temperature-related pressures are already raising cooling costs and complicating outdoor seating operations across the largest segment of the sector.

Infrastructure deficiencies linked to environmental factors affect a substantial portion of businesses, though not the majority: 32.5 % of respondents report having experienced such problems. While serious when they occur, these issues are not as widespread as sometimes assumed, with two - third of companies stating they have not faced significant infrastructure-related disruptions due to environmental factors.

The primary infrastructure challenge is an inadequate sewage and drainage network, causing water pollution and flooding that directly disrupts business operations. Among affected companies, insufficient sewage systems are the most common issue (54 %), often explicitly linked to urban flooding (4 mentions, or 31 % of cases). This points to chronic underinvestment in municipal drainage maintenance. Water pollution and poor drinking/usable water quality are cited by 23 %, critically impacting water-dependent businesses like HORECA. Waste collection and landfill management shortcomings are also notable (15 %), revealing broader gaps in solid waste systems.

Socioeconomic Consequences

Nearly two-thirds (67.5 %) of surveyed organizations anticipate that the socio-economic consequences of climate change could disrupt their business operations. This result reflects a strong awareness in the business sector that climate risks are multifaceted, extending beyond environmental concerns to directly impact economic factors like pricing, supply chains, and market dynamics.



Figure 11. Socio-economic influence of climate change on businesses

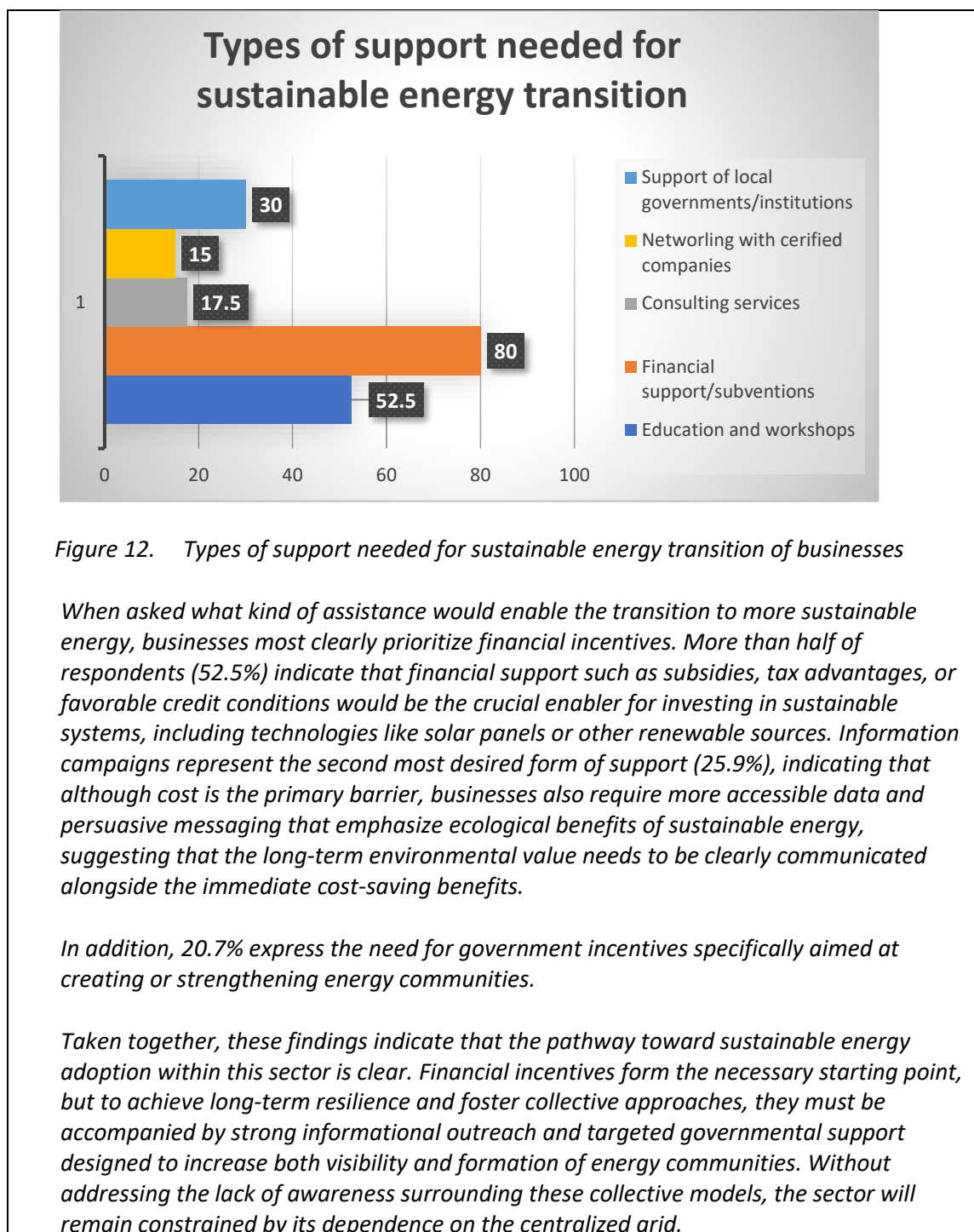
The greatest perceived socio-economic threat is the direct increase in operational costs due to rising energy and raw material prices — cited by 81.5 % of respondents who recognize socio-economic risks. Nearly half (48.1 %) are concerned about increased market competition, likely anticipating that climate change and new regulations will favor more sustainable or faster-adapting businesses. One-quarter of respondents (25.9 % each) highlight changes in legal regulations and reduced consumer demand/spending power as significant risks, pointing to a dual challenge: higher compliance costs and potential revenue pressure from economic instability and shifting guest preferences.

5 Access to sustainable energy sources. Opportunities and constraints.

- *Incentives for renewable energy adoption*
- *Information campaigns*
- *Support for energy communities*

The analysis reveals a heavy dependence on conventional energy, coupled with low awareness of collective energy solutions, but a clear demand for financial assistance to shift toward greener sources. The primary constraint facing businesses is the overwhelming reliance on the conventional power grid, used by 84.1% of respondents, while the adoption of truly sustainable alternatives remains marginal. Solar energy is the only notable alternative and is used by only 9.1% of the sample, whereas other potential sources such as wind energy and pellet remain negligible. This reliance creates a vulnerability to energy price volatility and grid reliability issues, further exacerbated by climate change pressures.

Despite these constraints, there is a significant opportunity to grow community-based energy initiatives. Awareness of energy communities is extremely low, as 90% of respondents state they are not aware of the existence of such initiatives in their region, while only 10% report any knowledge of them. This lack of awareness suggests a missed opportunity for shared investment, risk distribution, and decentralized energy solutions.



6 Awareness and interest about Environmental quality certifications

- Awareness of Certification Schemes (EMAS, ISO 14001, Green Key, others)
- Steps Toward Certification (Actions already taken)

- *Main barriers to certification practices (cost, information gap, lack of customer demand)*
- *Environmental quality management Structures (environmental-manual manager, Inclusion in business strategy)*

The analysis shows that the vast majority of businesses are currently not engaged in formal Environmental Quality Management (EQM) processes, with low awareness of certification schemes and a critical absence of internal management structures. Awareness of environmental certification programs is generally low, as only 30% of respondents are familiar with any scheme, while 70% have never encountered them. Among those few familiar with certification, the perception is uneven and leans strongly toward general corporate standards rather than tourism-specific eco-labels:

- **ISO 14001** is the most recognized (64.3%), indicating a preference for broad, internationally recognized standards.
- **Green Key** (28.6%) shows moderate recognition, which is expected for a tourism-specific eco-label.
- **EMAS** (7.1%) remains largely unknown.

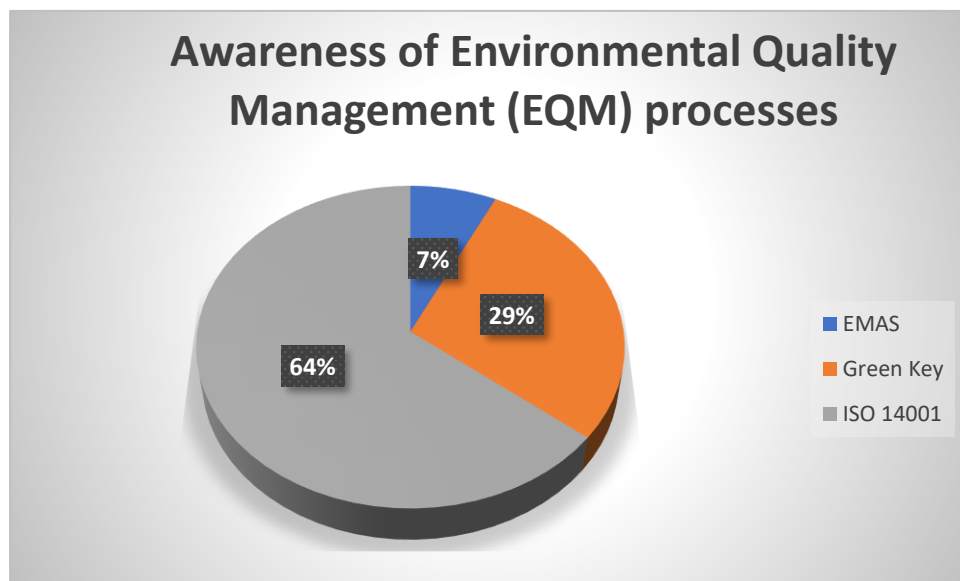


Figure 13. *The most recognizable Environmental Quality Management processes*

These insights demonstrate that while ISO 14001 has notable visibility, labels that are directly relevant to tourism still lack meaningful awareness in the local market.

Interest in actively pursuing certification is extremely low. A negligible 7.5% of the businesses reported taking steps toward obtaining an environmental certificate, while 92.5% have taken none, indicating that EQM remains distant from operational priorities in the sector. The implementation of Environmental Management Practices (which includes certification) is

primarily hampered by two critical resource issues: financial constraints and a lack of knowledge/training.

Financial constraints and the lack of internal knowledge or training are tied as the most significant issues (23.5% each), followed by insufficient technical assistance from public bodies (17.6%), and low customer willingness to pay for eco-friendly services (14.1%). businesses lack both the capital and the expertise to implement rigorous environmental standards, further underscored by the need for external governmental or NGO support, while simultaneously operating in a market environment where demand for certified establishments is weak and provides little incentive for action.

The lack of formal structure within the businesses strongly correlates with the low rate of certification steps taken. Only 5% of businesses have a designated person responsible for EQM, and only 5% include environmental topics in strategic planning, meaning that 95% operate without leadership, accountability, or systematic consideration of sustainability.

This indicates that EQM is currently treated as an ad hoc activity rather than an integrated part of operations or long-term strategy, which is the foundational requirement for obtaining any rigorous environmental certification.

7 Main Barriers to the access to environmental quality certification

- *Financial, operational, knowledge-based constraints*
- *Customer awareness issues*
- *Lack of available practices for certain business types*

Financial limitations remain the most significant constraint, with more than 52% of businesses indicating that insufficient funds hinder their ability to invest in sustainability measures. This is closely followed by lack of knowledge/staff training (47.5 %) and lack of technical support from public institutions (35 %).

The financial constraint is particularly strong among micro and small enterprises (the vast majority of the sample employ fewer than 15 people), where any environmental investment is often perceived as disproportionately expensive relative to current turnover. However, the fact that “only” about half of respondents highlight money as the primary issue also shows that non-financial barriers (information, training, technical support) are almost equally important.

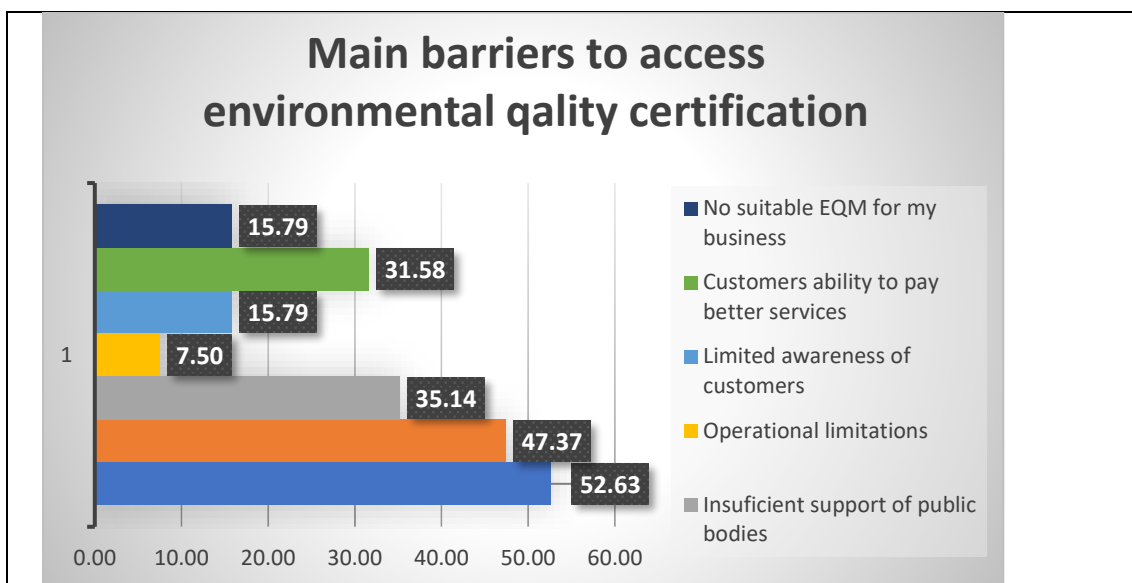


Figure 14. Main Barriers to the access to environmental quality certification

Considerable skills gap also limits progress. Approximately half of respondents report that staff lack the necessary knowledge or training to implement environmental practices effectively. This highlights a strong demand for accessible and practical capacity-building programs such as workshops, online courses, and Serbian-language operational guides.

Institutional support is perceived as inadequate, and both consumer awareness and willingness to pay for greener services remain low. Around one-third of businesses point to a lack of technical assistance from municipal and national authorities, along with limited customer readiness to cover the additional costs of environmentally responsible services. This reflects a typical “vicious cycle” in developing contexts: without consumer demand, businesses lack the incentive, and financial stability to invest in greener operations.

Furthermore, 15% of enterprises—mainly small cafés and restaurants—believe that suitable environmental practices are simply not applicable to their business model. This reinforces the need for tailored, low-cost sustainability solutions specifically adapted to the realities of the hospitality industry.

Financial constraints and lack of knowledge/training are by far the biggest barriers for restaurants and cafés: 64.5 % and 58.1 % respectively. One in three food-service businesses (32 %) also reports that customers are unwilling to pay more for greener services, and a similar proportion (39 %) lacks technical support from public institutions. Additionally, 16 % of restaurants/cafés believe that no suitable environmental practices exist for their type of operation. Among the few accommodation providers, financial limitations are even more acute (75 %). Hotels also show higher awareness of the need for technical assistance and of the risk that guests may not accept higher prices for improved sustainability. Travel agencies and guides stand out positively: only 25 % cite financial barriers and none mention lack of knowledge. Their main concerns are the perceived lack of practices adapted to their business model (25 %) and clients’ unwillingness to pay extra for sustainable offers (25 %). This clearly

shows that the nature and intensity of barriers vary significantly by sub-sector, requiring tailored support measures.

A similar pattern is observed with respect to enterprise size: financial limitations are the main concern for small businesses (5–14 employees), affecting 72.7 % of respondents. Micro-enterprises report these barriers somewhat less frequently (58.8 %), likely because they already operate with minimal costs and perceive any additional investments as prohibitively expensive. Lack of knowledge and training is most common among small businesses (63.6 %), compared to 52.9 % in micro-enterprises and 40 % in medium-sized companies. The perceived lack of technical support from public institutions increases significantly with enterprise size (micro: 23.5 %; small: 36.4 %; medium: 60 %).

8 Expected Benefits from Environmental Quality Management

- *Operational cost reduction,*
- *Access to funding,*
- *Market competitiveness,*
- *Climate change resilience*

*Businesses primarily view Environmental Quality Management (EQM) as a powerful tool for achieving **immediate economic efficiency** and **gaining a competitive edge**, with concerns about climate change resilience being a secondary, though still important, consideration.*

The most anticipated benefit from implementing environmental practices is Operational Cost Reduction (52.5%). This high frequency confirms that businesses prioritize direct financial gains, and EQM measures such as water and energy efficiency are seen as a reliable way to lower utility bills and reduce waste, providing a clear Return on Investment (ROI) even without the formal certification badge.

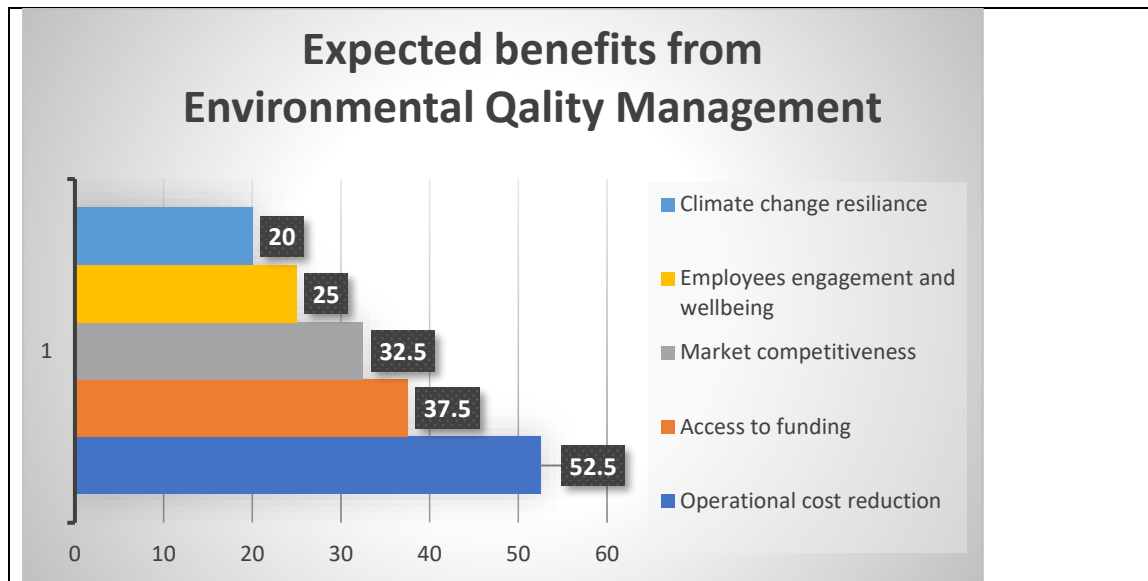


Figure 15. Expected Benefits from Environmental Quality Management

Access to Funding and Market Competitiveness are also viewed as primary external rewards for adopting EQM, reflecting a belief that environmental responsibility translates directly into economic advantage. Access to Funding (37.5%) is the second highest priority, suggesting that businesses understand that banks, public institutions, and international donors increasingly favour or require green credentials for financing. Given that financial constraints were cited as a primary barrier to EQM adoption, securing this funding stream is logically seen as a critical benefit. Market Competitiveness (32.5%) is the third most important benefit, showing that businesses recognize the strategic value of differentiation, believing that visible environmental commitment will attract eco-conscious customers, enhance reputation, and increase overall brand value in the competitive tourism market.

While the motivation for EQM is strongly tied to financial and market gains, Climate Change Resilience is also a recognized, although viewed as a lower priority. Cited by 20% of respondents, this expectation shows an understanding that EQM practices, such as optimizing resource consumption and developing robust operations, naturally build resistance against climate-related shocks (like droughts or extreme weather events) that were identified as a major impact concern.

*The expected benefits align closely with the current constraints identified in other parts of the audit: businesses are keen on EQM, not only to achieve **Operational cost reduction** (addressing high running costs) but crucially, to gain **Access to funding** which would help them overcome the initial high investment costs of becoming sustainable. Market positioning and resilience, while important, appear to be secondary drivers after immediate financial relief and competitive positioning.*

9 Preferred Forms of Support

- Training & workshops, Financial subsidies, Consultancy services, Public-sector support, Networking with certified businesses

The largest type of support requested by businesses is financial assistance or subsidies, with 80% of respondents choosing this option. Many respondents state that without direct financial help, investments in energy efficiency, waste systems, or other green improvements are simply unrealistic. Training and workshops, chosen by 55% of respondents, further confirm that more than half of micro and small businesses in the municipality of Medijana want to improve their knowledge in this area but currently do not know how to start or effectively implement environmental measures.

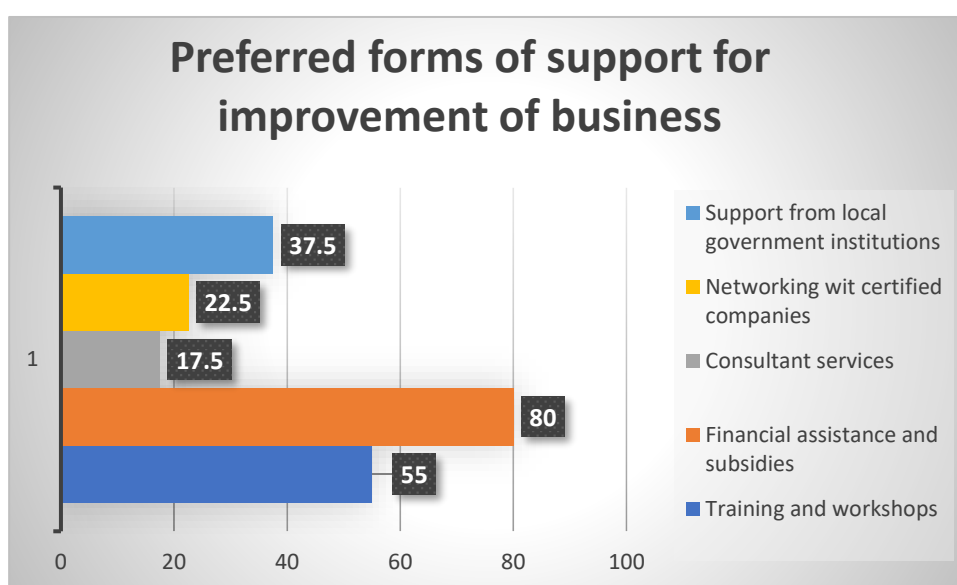


Figure 16. Preferred forms of support for improvement of EQM, climate change resilience and green energy transition

Beyond these top priorities, several other forms of support appear significantly less influential in the eyes of businesses. Support from local government institutions is requested by 37.5% of respondents, indicating that while institutional backing is valued, it is not yet perceived as a consistently reliable or accessible resource. Networking with certified or more advanced businesses is selected by 22.5% of respondents, showing that peer learning and experience-sharing remain underutilized despite their proven benefits in other EU contexts. Consulting services are requested by only 17.5% of respondents, raising important questions about whether businesses are aware of the practical value of tailored expert guidance—or whether consulting support is simply viewed as too costly or too abstract for immediate needs.

In municipality of Medijana, there is currently no public-private partnership in the environmental or sustainable tourism field that the private sector considers well-functioning — only one of respondents chose the option “yes, well-established”. Almost 70% of businesses

(exactly 42.5% + 25%) explicitly call for either substantial strengthening of existing forms of cooperation or the urgent creation of completely new partnerships. This result is one of the clearest signals from the entire survey: the private sector in municipality of Mediana sees an institutional vacuum in public-private environmental cooperation (97.5%) and overwhelmingly two-thirds of respondents (67.5%) demands that this gap be closed as a matter of priority.

10 Specific Case Studies (territory/region/country)

- *Main patterns identified*
- *Key recommendations*

The findings of the research reveal a tourism and hospitality sector in municipality of Medijana that is dominated by micro and small enterprises, primarily restaurants and cafés, with only a modest presence of hotels, travel agencies, and cultural institutions. Most of these businesses operate outside protected natural or cultural areas, and nearly all are privately owned. Despite their size and limited resources, many have already adopted the most basic and low-cost sustainability measures, such as LED lighting, efficient water fixtures, or reusable guest products. Local food sourcing stands out as the strongest and most widespread environmental practice, forming a valuable base for further development. Yet, more advanced or systemic efforts—such as food-waste management, structured guest education, or the use of low-emission transport—remain rare and underdeveloped.

The most striking pattern is the near absence of formal environmental governance. Only a small minority claim to have an environmental policy, and even these are informal statements with no written documents, no assigned responsibilities, and no integration into business planning. Across the entire sample, not a single business has begun the process of obtaining a recognized environmental certificate, whether general (ISO 14001) or tourism-specific (Green Key, EMAS, Travelife). This lack of structure means that environmental actions, when they exist, are ad-hoc, driven by individual motivation rather than organizational commitment.

Climate change has already become a tangible operational burden. More than half of the surveyed businesses report direct impacts, particularly from rising temperatures, heatwaves, and extreme weather events. Restaurants and cafés face challenges in outdoor operations and increased cooling costs, while accommodation providers observe shifts in seasonality that affect occupancy and revenues. Infrastructure deficiencies add another layer of vulnerability. Insufficient sewage and drainage systems, occasional water-quality problems, and inadequate solid-waste management disrupt business activities for nearly one-third of respondents, reflecting broader urban-environmental constraints.

The sector is also highly aware of the socio-economic risks associated with climate change. Rising energy and raw-material costs are seen as the most immediate threat, followed by concerns about stronger competition and new regulatory demands. Yet despite this awareness, the

dominant motivation for sustainability remains financial: most businesses see environmental improvements primarily as a way to reduce utility bills. Branding, market positioning, employee well-being, or climate resilience are far less influential incentives.

Barriers to further progress are consistent and deeply structural. Financial limitations are the single most frequently cited obstacle, especially among small enterprises with limited room for investment. Equally important is the lack of knowledge and practical skills needed to implement environmental measures. Many businesses do not know where to start, what solutions exist, or how they apply to their operational reality. Technical support from institutions is perceived as weak, and customer demand for green services remains low, creating a vicious cycle in which investments seem risky and benefits uncertain.

At the same time, the sector expresses an overwhelming need for direct assistance. Training and workshops are identified as the most urgent form of support, followed closely by financial incentives such as grants, subsidies, or favorable loans. More sophisticated approaches—consultancy, networking, or cluster formation—are still perceived as secondary. Finally, the research reveals a complete absence of functional public–private cooperation in the field of environmental management or sustainable tourism. Businesses do not feel connected to local institutions, nor do they perceive any existing partnership as effective. Yet almost 67,5% of them explicitly request the creation or strengthening of such collaboration.

Taken together, these patterns point to a tourism sector that has completed the easiest and cheapest phase of the green transition, but now stands at a crossroads: further progress will require more structure, more support, and more coordinated action. To move forward, businesses in Niš need simple and practical environmental governance tools, sector-specific guidance, and a step-by-step certification pathway adapted to micro and small enterprises. Equally important is the establishment of a strong institutional framework—a local program for green tourism and a public–private council—to provide continuous training, tailored technical assistance, and targeted financial support. With such mechanisms in place, the sector could progress from basic eco-efficiency to genuine sustainability, strengthening both its competitiveness and resilience in the years to come.

11 Conclusion - Recommendations (Region-Specific)

- *Readiness level of the region regarding environmental management and certification*
- *Priority interventions for businesses*
- *Suggested public policies or local authority actions*
- *Training and capacity-building proposals*
- *Possible pilot projects or demonstration actions*

The findings show that the sector is motivated, but lacks the structure, knowledge, and resources to systematically implement environmental practices. For this reason, the recommendations focus on creating practical tools, removing barriers, and establishing a supportive institutional environment.

The first priority is to introduce basic environmental governance at the enterprise level. Most businesses operate without any formal policy, plan, or responsible person for environmental management. Providing simple, ready-to-use templates for environmental policies, action plans, and monitoring routines would allow even the smallest enterprises to adopt a minimum standard of organizational responsibility. These tools should require no specialized expertise and should be offered in a format that businesses can immediately adapt and use. Establishing a responsible staff member — even if only part-time — for energy, water, and waste monitoring would also help embed sustainability into day-to-day operations.

A second major recommendation is the creation of a local green tourism program tailored specifically to Niš. Such a program should function as a central point for training, technical support, and recognition of progress. It should offer practical workshops, operational guides in Serbian, and short learning modules that demonstrate low-cost solutions suitable for micro and small businesses. A staged “readiness badge” system — for example, bronze, silver, and gold levels — could reward businesses that complete initial steps and gradually prepare for international certifications such as Green Key, ISO 14001, or Travelife. This local recognition would reduce the intimidation factor associated with global certification and show businesses a realistic path forward.

Given the strong financial constraints observed in the sector, targeted financial instruments are also essential. Small grants, co-financing schemes, and preferential loans should be developed to support investments in energy-efficient equipment, water-saving devices, waste management systems, and monitoring technologies. These instruments do not need to be large; even modest amounts can have a significant impact for micro-enterprises. The key is to reduce the perceived risk of investing in sustainability and to help businesses understand the long-term cost-saving potential.

Beyond enterprise-level improvements, Niš needs stronger institutional cooperation. The research clearly indicates that businesses feel isolated and perceive a serious institutional gap. Establishing a public–private advisory body—such as a Niš Green Tourism Council—would create a platform for continuous dialogue, coordination, and problem-solving. This body should bring together city authorities, tourism organizations, business associations, and environmental experts to address specific challenges, particularly waste management,

sewage and drainage issues, water quality, and climate resilience. In addition to these operational and institutional issues, the region is increasingly affected by climatic instability, particularly irregular precipitation patterns. In recent years, Niš and its surrounding areas have experienced a marked decline in snow-covered days during winter and prolonged periods of low rainfall in summer. These shifts have contributed to a gradual reduction in groundwater levels and increased pressure on local water resources. Such hydrological changes underline the urgency of strengthening climate resilience measures within the tourism and hospitality sector and highlight the need for future projects that specifically address water availability, sustainable resource use, and long-term adaptation planning. A permanent cooperation structure would also prevent sustainability initiatives from becoming fragmented or overly dependent on short-term projects.

Sector-specific guidance is equally important. Restaurants, hotels, travel agencies, and cultural institutions face different challenges and require tailored solutions. For food-service establishments, priority actions should focus on food-waste management, local sourcing, and low-cost guest communication. Hotels would benefit from improved linen/towel programs, heating and cooling management, and clearer sustainable tourism messaging. Travel agencies and tour operators need support in designing low-impact tours, promoting sustainable transport options, and educating visitors. Offering practical checklists for each sub-sector would help businesses identify feasible steps without feeling overwhelmed.

Finally, the city should invest in building awareness and demand for sustainable tourism. Consumers in Niš still rarely choose businesses based on environmental performance, which discourages enterprises from taking bold steps. Public campaigns, visitor-facing eco-tips, green maps of certified or eco-friendly businesses, and sustainability awards can gradually shift expectations and strengthen the market advantage of greener enterprises.

Taken together, these recommendations constitute a roadmap for advancing environmental quality management in Niš's tourism sector. With the right combination of training, financial incentives, institutional support, and practical tools, the city can help its businesses move beyond basic eco-efficiency toward a more resilient, competitive, and sustainability-oriented future.