

# Museums as Catalysts for Sustainable Cultural Tourism: Insights from Hungary<sup>1</sup>

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## *Museums as Catalysts for Sustainable Cultural Tourism: Insights from Hungary*

This article applies a four-pillar sustainability framework comprising cultural, environmental, social and economic dimensions, to assess 46 museums in the less-developed Hungarian counties of Szabolcs–Szatmár–Bereg and Borsod–Abaúj–Zemplén, thereby addressing a research gap, as previous studies have tended to focus on more developed regions. The results show that half the institutions do not have formal sustainability strategies, but many are implementing practical initiatives. Environmental actions are largely low-cost, while social and cultural contributions are strong, with museums acting as community hubs, educators and custodians of heritage. Economically, museums support sustainability through local employment and procurement. The study highlights museums' under-recognised potential in sustainable tourism and calls for clearer strategies, investment and professional training.

Keywords: museums, sustainability, sustainable cultural tourism, four pillars

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## Introduction

Sustainable cultural tourism has increasingly gained attention as a vital component in harmonising tourism development with cultural preservation, environmental conservation and socio-economic growth. As tourism continues to expand globally, the integration of sustainability principles into cultural tourism practices has become crucial to mitigating negative impacts and ensuring long-term benefits for local communities and future generations.<sup>2</sup>

In the context of cultural tourism, museums are uniquely positioned. In Hungary, as in other European countries, museums have traditionally served as guardians of cultural heritage. Over the past century, museums have gained increasing popularity both as cultural tourism attractions and as leisure destinations. According to the 2024 European museum report, numerous European countries reported record-breaking visitor numbers,<sup>3</sup> a trend that is likewise evident in Hungary. Between 2012 and 2019, the number of visitors to Hungarian museums grew by an average of 38%, with museums welcoming over 11.5 million visitors in 2019.<sup>4</sup> Although this upward trend was temporarily disrupted by the COVID-19 pandemic, visitor numbers in 2023 had nearly returned to the record levels achieved in 2019.

Beyond their capacity to attract large audiences, museums can be understood as key actors in advancing sustainable tourism. Their contribution extends not only to environmental performance<sup>5</sup> but also to the promotion of social cohesion, diversity<sup>6</sup> and the equitable distribution of economic benefits across the local tourism industry.<sup>7</sup>

However, despite their potential, empirical knowledge on how museums integrate sustainability into practice in relation to cultural tourism, especially in Central and Eastern Europe, remains limited. The literature on sustainability, cultural tourism and museums has increasingly examined the role of cultural heritage in sustainable development,<sup>8</sup> or more specifically in the sustainable development of the tourism sector,<sup>9</sup> but museums have been studied only in terms of their role as a catalyst for local development and sustainability, rather than as a catalyst for sustainable cultural tourism.<sup>10</sup> Moreover, the majority of the current literature emphasises urban and developed regions, while small and medium-sized cities are rarely the subject of investigation.<sup>11</sup>

Addressing the aforementioned gaps, the present study investigates the extent to which museums integrate sustainability across four pillars (economic, environmental, social and

<sup>2</sup> UNEP. *Making tourism more sustainable: A guide for policy makers*. Paris: UNEP, 2005.

<sup>3</sup> EMA. *EMA Situation for Museums in Europe Report*, 2024, p. 3.

<sup>4</sup> Muzeumstat: Summary, accessed August 21, 2025, <https://muzeumstat.hu/hu/summary/>

<sup>5</sup> MCGHIE, Henry. *Museums and the Sustainable Development Goals: A How-to Guide for Museums, Galleries, the Cultural Sector and Their Partners*. UK: Curating Tomorrow, 2019, p. 56.

<sup>6</sup> WIKTOR-MACH, Dobrosława. What role for culture in the age of sustainable development? UNESCO's advocacy in the 2030 Agenda negotiations. In: *International Journal of Cultural Policy* 26(3), 2020, pp. 312–313; 315.

<sup>7</sup> MAVRAGANI, Eleni. Museum Services in the Era of Tourism. In: BAST, Gerald, CARAYANNIS, Elias G., CAMPBELL, David F. J. (eds.), *The Future of Museums*. Cham: Springer International Publishing, 2018, pp. 37–47.

<sup>8</sup> NOCCA, Francesca. The Role of Cultural Heritage in Sustainable Development: Multidimensional Indicators as Decision-Making Tool. In: *Sustainability* 9(10), 2017.

<sup>9</sup> PRIPORAS, Constantinos-Vasilios et al. Cultural Heritage as an Engine of Sustainable Development in the Tourism Sector. In: INCE-YENILMEZ, Meltem, DARICI, Burak (eds.) *Engines of Economic Prosperity*. Cham: Springer International Publishing, 2021, pp. 193–208.

<sup>10</sup> BROWN, Karen. Museums and Local Development: An Introduction to Museums, Sustainability and Well-being. In: *Museum International* 71(3–4), 2019, pp. 1–13.

<sup>11</sup> SELADA, Catarina, VILHENA DA CUNHA, Inês, TOMAZ, Elisabete. Creative-Based Strategies in Small and Medium-Sized Cities: Key Dimensions of Analysis. In: *Quaestiones Geographicae* 31(4), 2012, pp. 43–51.

cultural), using empirical data collected through a questionnaire survey of museums in two rural counties of Hungary, Borsod–Abaúj–Zemplén and Szabolcs–Szatmár–Bereg.

The study has three main objectives. Firstly, to assess the depth and nature of sustainability-related practices within museums; secondly, to identify strengths, gaps and opportunities for enhancing museums' role as actors in sustainable tourism; and finally, to examine undeveloped parts of Hungary, specifically small and medium-sized cities, in contrast to the expanding literature on developed areas. By situating the findings within both international and national contexts, this research contributes to the growing body of literature on the intersection of museums and sustainable cultural tourism, offering practical insights for policymakers, museum managers and tourism stakeholders.

In the sections that follow, we first provide an overview of the theoretical framework underpinning our research, accompanied by a brief account of existing knowledge on sustainability practices within Hungarian museums. Then we present the case study and research methodology, followed by an analysis of the empirical findings and their interpretation within a broader contextual framework.

## Literature review

The following section reviews existing knowledge on cultural tourism, museology and sustainability in order to situate this study within the broader academic conversation.

Tourism is inseparably linked with culture: human curiosity and the desire to learn about the world and other cultures are often the main motivators for tourists.<sup>12</sup> The practice of visiting cultural heritage sites, primarily in European cities (e.g., Italy, Greece, France), has a long history dating back to the eighteenth century. For many years, cultural heritage was largely accessible only to the wealthy. During the so-called Grand Tour of the eighteenth century, a cultural journey undertaken by young men as part of their education, the upper classes travelled to Europe's major cultural destinations.<sup>13</sup> The popularity of tourism grew significantly in the second half of the twentieth century, while the phenomenon of the so-called "heritage production boom" and museum-boom were noticeable all over the world.<sup>14</sup>

Since the emergence of mass tourism in the 1980s, cultural tourism has been acknowledged as a noticeable market niche where culture, and thus museums, play a prominent role.<sup>15</sup> Over the past few decades, the role of museums has been questioned and reconceptualised globally. As museums are increasingly recognised as mediators of social and economic change, they are expected to offer more than just aesthetic pleasure or education.<sup>16</sup> Museums today serve as both temples of knowledge<sup>17</sup> where experts guide discussions, and contemporary forums which can actively advance discussions on a range of topics, including memory, identity, sustainable development, and life and death. They can boost civic engagement, revitalise the local economy, foster cultural diversity and strengthen identities.<sup>18</sup>

<sup>12</sup> HERREMAN, Yani. Museums and Tourism: Culture and Consumption. In: *Museum International* 50(3), 1998, pp. 4–6.

<sup>13</sup> RICHARDS, Greg. *Rethinking Cultural Tourism*, Cheltenham: Edward Elgar Publishing, 2021, p. 22.

<sup>14</sup> MAVRAGANI, Museum Services..., pp. 37–47; RICHARDS, Rethinking...

<sup>15</sup> RICHARDS, Greg. *Cultural Tourism in Europe*, Wallingford: CAB International, 1996, p. 13.

<sup>16</sup> BROWN, Karen, MAIRESSE, François. The definition of the museum through its social role. In: *Curator: The Museum Journal* 61(4), 2018, p. 5.

<sup>17</sup> CAMERON, Duncan F. The Museum, a Temple or the Forum. In: *Curator: The Museum Journal*. 14(1), 1971, pp. 11–24.

<sup>18</sup> VERGO, Peter (ed). *The new museology*. London: Reaktion Books, 2009, p. 3.

The rise of urban tourism prompted cities to recognise the potential of museums and cultural capital as drivers of development, leading to increased investment in cultural institutions.<sup>19</sup> Early successes, such as New York's Lincoln Center (1962–1968) and the Pompidou Centre in Paris (1977), demonstrated the potential of such initiatives. However, the true breakthrough occurred with the revitalisation of Bilbao, Spain, giving rise to what is now commonly referred to as the “Bilbao Effect”, inspired by the culture-led revitalisation of the formerly industrial city. While it is now widely recognised that the transformation of the city resulted from a comprehensive, large-scale investment strategy rather than solely from the opening of a contemporary art museum, the Guggenheim Museum Bilbao has emerged as an iconic symbol of cultural regeneration initiatives worldwide.<sup>20</sup>

As a result of the aforementioned shifts in museology, cultural heritage and museums are increasingly recognised not only for their role in regional development but also as strategic assets within tourism policies, particularly within the growing competition among tourist destinations striving to maintain and enhance their status in an expanding global sector.<sup>21</sup> In the following years, various materialisations of local culture and heritage became attractive elements of tourism (cultural attractions), especially in the European cities.<sup>22</sup> It is now widely recognised that cultural attractions play a crucial role in enhancing the appeal of tourist destinations. In 2021, cultural tourism represented nearly 40% of all tourism in Europe.<sup>23</sup>

Museums are uniquely positioned at this intersection, serving as guardians of cultural heritage while also functioning as tourism attractions and community institutions. Through exhibitions, educational programs and partnerships, they can promote environmentally responsible behaviour, strengthen local economies and preserve intangible heritage, aligning with the principles of both sustainable development and responsible tourism.<sup>24</sup>

## Sustainable Cultural Tourism

Sustainable cultural tourism has emerged as a subfield within tourism studies, representing the intersection of cultural heritage preservation, community development and environmental responsibility.<sup>25</sup> As global tourism increases in scale and complexity, scholars and practitioners alike recognise the need for models that both celebrate cultural diversity and mitigate negative impacts on host communities and ecosystems.<sup>26</sup>

Creating a comprehensive definition of cultural tourism is difficult due to its complexity, and it has been problematic for experts since the term first emerged.<sup>27</sup> Among the number of definitions that have been proposed for cultural tourism, there are a huge group of motivation-

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<sup>19</sup> LAK, Azadeh, GHEITASI, Mahdi, TIMOTHY, Dallen J. Urban regeneration through heritage tourism: cultural policies and strategic management. In: *Journal of Tourism and Cultural Change* 18(4), 2020, pp. 389–390.

<sup>20</sup> HEIDENREICH, Martin, PLAZA, Beatriz. Renewal through Culture? The Role of Museums in the Renewal of Industrial Regions in Europe. In: *European Planning Studies* 23(8), 2015, pp. 1442–1443.

<sup>21</sup> RICHARDS, Cultural..., pp. 10–11.

<sup>22</sup> NOONAN, Lisa. The role of culture as a determinant of tourism demand: evidence from European cities. In: *International Journal of Tourism Cities* 9(1), 2023, pp. 13–14.

<sup>23</sup> *Cultural heritage in regional policy*, accessed August 21, 2025, <https://culture.ec.europa.eu/cultural-heritage/cultural-heritage-in-eu-policies/cultural-heritage-in-regional-policy>

<sup>24</sup> HEIDENREICH and PLAZA, Renewal..., p. 1449.

<sup>25</sup> UNEP, Making tourism...

<sup>26</sup> DU CROS, Hilary, and MCKERCHER, Bob. *Cultural tourism*. 3rd ed. Abingdon: Routledge, 2020, pp. 13–18.

<sup>27</sup> *Ibidem* p. 3.

related ones,<sup>28</sup> while a few researchers have defined cultural tourism as a component of a product, which is a somewhat marketing-oriented explanation.<sup>29</sup> The definitions can also be grouped both conceptually, focusing on the meaning of cultural tourism (in connection with motivation and the desire to learn and experience authenticity), and technically, focusing on the different kinds of sites and attractions.<sup>30</sup>

Sustainable cultural tourism, however, is about bringing cultural heritage to the fore without damaging it and promoting its conservation and authenticity. Crucially, it involves local communities in ways that do not compromise their daily lives. Sustainable cultural tourism also emphasises the contribution to the local economy.<sup>31</sup> While sustainable cultural tourism emphasises positive development outcomes, increasing attention has been given to the concept of carrying capacity, particularly in fragile rural destinations. Carrying capacity refers to the maximum number of visitors that a site can accommodate without causing degradation to the physical environment, cultural heritage, or the quality of life of local communities. In the context of small rural museums, excessive visitor growth may lead to pressures on limited infrastructure, erosion of authenticity, and conflicts with local residents. Therefore, sustainable tourism development must balance visitor increase with preservation objectives, especially in regions where institutional and environmental resilience is limited.<sup>32</sup>

The heritage sector plays an important role in tourism worldwide, which can significantly affect the environment, local economies and communities. Although the impact of tourism can often be negative, all three aspects of sustainability can benefit greatly from a well-managed tourism sector that can also create jobs and generate income for local communities, while protecting and enhancing the natural environment.<sup>33</sup> It is important to separate well-managed sustainable cultural tourism from growing tourism and increased visitor numbers as positive instruments for rural development.

## Museums and Sustainability

The conventional and most broadly recognised notion of the museum, together with its implementation in museum practice, emphasises the methodology of work. In general, institutions direct their attention inwards and the work is controlled by museum experts and professionals.<sup>34</sup> For decades, the primary functions of museums were the preservation, maintenance, interpretation and exhibition of collections, although the social role of the museum and its educational tasks had already been formulated.<sup>35</sup>

The ideas behind the so-called New Museology emerged in the second half of the twentieth century. In contrast to the classical concept of museums, New Museology aims

<sup>28</sup> TOWSE, Ruth. ed. *A handbook of cultural economics*. 2nd ed. Cheltenham: Edward Elgar Publishing, 2011, pp. 166–171; WORLD TOURISM ORGANIZATION. *Tourism and culture synergies*. Madrid, Spain: UNWTO, 2018.

<sup>29</sup> MCKERCHER, Bob, HO, Pamela S. Y., DU CROS, Hilary. Relationship between tourism and cultural heritage management: Evidence from Hong Kong. In: *Tourism Management* 26(4), 2005, pp. 539–548.

<sup>30</sup> TOWSE, A handbook...

<sup>31</sup> Sustainable cultural tourism. Luxembourg: Publications Office of the European Union, 2019, p. 25.

<sup>32</sup> SAVERIADES, Alex. Establishing the social tourism carrying capacity for the tourist resorts of the east coast of the Republic of Cyprus. In: *Tourism Management* 21(2), 2000, p. 148; KOANS, Ko, POSTMA, Albert, PAPP, Bernadett. Is overtourism overused? Understanding the impact of tourism in a city context. In: *Sustainability* 10(12), 2018.

<sup>33</sup> MCGHIE, *Museums and the Sustainable Development Goals...* p. 56.

<sup>34</sup> VERGO, *New museology...*, p. 3.

<sup>35</sup> *224 Years of Defining the Museum*, accessed August 21, 2025, [https://icom.museum/wp-content/uploads/2020/12/2020\\_ICOM-Czech-Republic\\_224-years-of-defining-the-museum.pdf](https://icom.museum/wp-content/uploads/2020/12/2020_ICOM-Czech-Republic_224-years-of-defining-the-museum.pdf)

to make museums active and meaningful places within the local community. In the field of museology, novel topics have arisen from the concept of inclusion, with the development of new techniques.<sup>36</sup> The most important concepts behind New Museology are community engagement, dialogue, inclusivity and diversity, sustainability and social responsibility, digital innovation and critical reflection. The movement has prompted museums around the world to reconsider their roles and responsibilities within society, leading to innovative practices and the transformation of museums into forums and places of dialogue.<sup>37</sup>

While the 2030 Agenda for Sustainable Development was adopted by all the United Nations Member States in 2015, a few years later, the museum sector also started to recognise and implement sustainable development goals. Sustainability and the Sustainable Development Goals (SDGs) were hot topics in the 2019 Kyoto conference of the International Council of Museums, where the sessions acknowledged the roles of museums in working towards sustainable development.

In response to the growing international discourse on museums and sustainable development, scholars and practitioners in the cultural sector have increasingly emphasised the alignment of museum practices with the SDGs. This literature highlights that museums, through their diverse functions and activities, can contribute meaningfully to sustainability agendas, even though the SDGs were not specifically designed with cultural institutions in mind. Within this context, frameworks have been proposed to guide museums in embedding sustainable thinking into their operations, outlining concrete steps and activities through which they can advance the SDGs. Supporting sustainable tourism is among the activities.<sup>38</sup>

The concept of sustainability is traditionally framed around three pillars – environmental, social and economic – but in heritage and cultural contexts scholars increasingly advocate for a fourth cultural pillar, acknowledging that cultural continuity and identity are fundamental to sustainable development.<sup>39</sup> The Australian researcher, Jon Hawkes argued that culture should be regarded as the fourth pillar of sustainability, given its essential role in society, and that it should have a role especially in public planning, in order to understand and draw conclusions about the patterns of human activities. As noted by Worts, culture acts as the basis of societies, encompassing the values and frameworks that govern societal functioning. Humanity cannot progress without culture.<sup>40</sup>

### *Social sustainability*

All three pillars of sustainability are important to museums, although perhaps the most obvious is social sustainability. Social sustainability for museums entails developing into devoted and socially conscious organisations.<sup>41</sup> As part of this, organisations must become transparent, participatory, and actively involve communities in their work, creating long-term strategies for developing their relationships with their audiences. Social sustainability can also include

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<sup>36</sup> New Museology, accessed August 21, 2025, <http://tranzit.org/curatorialdictionary/index.php/dictionary/new-museology/>

<sup>37</sup> BROWN and MAIRESSE, *The definition...*, pp. 5–7.

<sup>38</sup> MCGHIE, *Museums and the Sustainable Development Goals...*, p. 56.

<sup>39</sup> HAWKES, Jon. *The fourth pillar of sustainability: Culture's essential role in public planning*. Melbourne: Cultural Development Network, 2001, p. 25.

<sup>40</sup> WORTS, Douglas. Culture and Museums in the Winds of Change: The Need for Cultural Indicators. In: *Culture and Local Governance* 3(1–2) 2011, p. 124.

<sup>41</sup> KI CULTURE, *Social Sustainability: A Step-by-Step Guide for Sustainable Action*. pp. 7–8.

ensuring human rights, such as gender equality and diversity, are met. These goals overlap with the community role of museums as set out in the International Council of Museum's Code of Ethics.<sup>42</sup> Socially and culturally, sustainable museums promote accessibility, equity and the safeguarding of both tangible and intangible heritage. They serve as community hubs that facilitate dialogue, lifelong learning and collective memory, thereby contributing to social sustainability and cultural resilience.<sup>43</sup>

### *Environmental sustainability*

Environmental sustainability refers to reducing carbon emissions, minimising waste and designing energy-efficient buildings and exhibitions.<sup>44</sup> Museums have a unique capacity to raise awareness about environmental issues and inspire behavioural change through exhibitions and public programming. As communicators of knowledge and values, museums are well positioned to engage the public with topics such as climate change, biodiversity loss and cultural sustainability.<sup>45</sup> In this way, museums can serve as platforms for transformative learning and agents of systemic change.<sup>46</sup> Museums are specifically mentioned in the Workplan for the Paris Agreement, acknowledging the important role they can play in “enhancing the implementation of education, training, public awareness, public participation and public access to information so as to enhance actions under the Paris Agreement”<sup>47</sup>

### *Economic sustainability*

In terms of economic sustainability, museums must also consider their financial viability. Typically, museums consume substantial resources, such as energy and water, and generate significant waste. By measuring these environmental effects, museums can identify areas for improvement in reducing their ecological footprint.<sup>48</sup> Implementing measures to mitigate these negative impacts can ideally also result in cost savings for the institution. However, museums can also contribute to job creation and support local economy. With the increasing importance of cultural tourism, cultural activities and institutions have become integral components of urban development strategies.<sup>49</sup> Tourism has been recognised as a valuable development tool: directly, it stimulates economic growth and generates employment opportunities; indirectly, it supports a range of related sectors such as hospitality, retail and transportation. From a community perspective, tourism, but more precisely culture and cultural institutions, can foster a sense of pride and belonging among residents.<sup>50</sup> The recognition of culture as a potential

<sup>42</sup> INTERNATIONALER MUSEUMSRAT. ed. *ICOM code of ethics for museums*. Paris: ICOM, 2017.

<sup>43</sup> BROWN and MAIRESSE, The definition..., pp. 6–8.

<sup>44</sup> GARTHE, Christopher J. *The Sustainable Museum: How Museums Contribute to the Great Transformation*, London: Routledge, 2022

<sup>45</sup> CAMERON, Fiona, HODGE, Bob, SALAZAR, Juan Francisco. Representing climate change in museum space and places. In: *WTREs Climate Change* 4(1), 2013, pp. 11–20.

<sup>46</sup> HANSSON, Petra, ÖHMAN, Johan. Museum education and sustainable development: A public pedagogy. In: *European Educational Research Journal* 21(3), 2022, pp. 470–472

<sup>47</sup> *Paris Agreement*, accessed August 21, 2025, [https://unfccc.int/sites/default/files/resource/cp24\\_auv\\_L.3\\_edu.pdf](https://unfccc.int/sites/default/files/resource/cp24_auv_L.3_edu.pdf)

<sup>48</sup> NAGY-SÁNDOR, Zsófia. *Museums for Sustainability: an Exploration of Hungarian Approaches*. Master's thesis, Central European University, 2020, pp. 46.

<sup>49</sup> FERILLI, Guido et al. Power to the people: When culture works as a social catalyst in urban regeneration processes (and when it does not). In: *European Planning Studies* 25(2), 2017, p. 241.

<sup>50</sup> HEIDENREICH and PLAZA, *Renewal...*, pp. 1445–1446.

driver of development initiatives began to emerge in the 1970s.<sup>51</sup> It was especially used for the regeneration of post-industrial urban areas. The establishment of the European Capital of Culture initiative in 1985 has further enhanced the role of culture in urban regeneration projects, for example, in the case of Glasgow in 1990.<sup>52</sup>

### *Cultural sustainability*

With regard to the cultural pillar of sustainability, interpretations of cultural sustainability within museology and heritage studies vary. Broadly, it refers to the preservation and safeguarding of collections, ensuring their accessibility and integrity for future generations.<sup>53</sup> This encompasses not only the balanced management of collections but also the responsibility to maintain the quality, relevance and authenticity of artistic and cultural content. Moreover, museums play a crucial role in fulfilling their institutional missions, which extend beyond preservation to include education, visitor engagement and the promotion of local culture.<sup>54</sup>

### The Hungarian Case

In Hungary, the concept of sustainability within the museum sector was first introduced on a national level in 2010.<sup>55</sup> In the following years, mention of sustainability remained sparse, appearing only in isolated instances and primarily through the initiatives of a limited number of museum professionals in diverse contexts (for example, at events like Pollinator Day, established in 2018).<sup>56</sup> A significant shift occurred following the International Council of Museums (ICOM) Conference in Kyoto in 2019, after which sustainability emerged as a prominent and widely discussed theme in the Hungarian museum community. Since then, numerous workshops, conferences and professional education programs have placed sustainable thinking at the centre of professional discourse and practice (Table 1).

**Tab. 1:** *Sustainability-related programs involving museums, 2019–2025*

<b>Events, Conferences and Milestones</b>	<b>Year</b>	<b>Topic</b>	<b>Location and relevance</b>
41st International Conference of Hungarian Restorers	2020	Heritage and climate change	Hungarian National Museum, Budapest; international
2nd National Museum Andragogy Workshop	2020	Museums and the Sustainable Development Goals; Establishment of the Pulszky Society's Working Group on Sustainability	Janus Pannonius Museum, Pécs; national

<sup>51</sup> LAK, GHEITASI and TIMOTHY, *Urban regeneration...*, p. 389.

<sup>52</sup> GARCIA, Beatriz. Deconstructing the City of Culture: The Long-term Cultural Legacies of Glasgow 1990. In: *Urban Studies* 42(5–6), 2005, p. 842.

<sup>53</sup> JÄRVELÄ, Marja. Social and cultural sustainability. In: KOHL, Johanna. *Dialogues on sustainable paths for the future: Ethics, welfare and responsibility*, 2008, pp. 46–65.

<sup>54</sup> ÁSVÁNYI, Katalin, FEHÉR, Zsuzsanna. Generation Z perspectives on museum sustainability using Q methodology. In: *Muzeológia a kultúrne dedičstvo* 11(1), 2023, 26.

<sup>55</sup> VÁSÁRHELYI, Tamás. Projekt módszer a múzeumban [Project methods in museums]. In: *Múzeumi Iránytű*, 8, 2010, pp. 137–146.

<sup>56</sup> ZÁDORI, István. Museums and Sustainability in the 21st Century. In: *Tudás Menedzsment*, 12(1), 2020, pp. 328–333.

Museums for Sustainability – Sustainability in Museums, workshops	2021–2022	Case studies and plans for the institutions; Henry McGhie: Museums and the Sustainable Development Goals, Hungarian translation	15 museums and 27 professionals; national, with participation across Hungary
Museums for Environmental Sustainability, workshop	2022	Popularising sustainability among young generations	Szentendre Hungarian Open Air Museum, Museum Education Centre; national
Green Museum – Ecological Approach	2022	MúzeumCafé magazine issue 89: museums and sustainability	National
You Can Bee (do) More – Buzzing in the museum	2022	Importance and work of the pollinators	Hungarian Natural History Museum, Budapest; local
10th National and 6th International Museum Andragogy Conference	2023	Museum Reflection: Society and Environment; case studies	Hungarian Academy of Sciences, Regional Committee Miskolc; national, international
International Museum Day	2023	Sustainability and wellbeing	National, international
Workshop, Pulszky Society's Working Group on Sustainability	2023	Improving environmental awareness among adults through case studies	Hungarian Natural History Museum, Budapest; national
Sustainability and museums in practice	2024	International and national case studies to inspire Hungarian museums	Kuny Domokos Museum, Tata; national
Sustainable Culture and Community, workshop	2024	Sustainable culture and community: Tradition and Modernity and Museums	Janus Pannonius Museum, Pécs; national
Szentendre Hungarian Open Air Museum, Museum Education Centre and the Pulszky Society – Hungarian Museum Association	2024	Quantitative survey on green museum management	National
Green Museums – Challenges and Opportunities in the Museum Green Transition	2024	Conference about the results of the national survey	Szentendre Hungarian Open Air Museum, Museum Education Centre; national

In 2024, the Szentendre Hungarian Open Air Museum, Museum Education Centre and the Pulszky Society – Hungarian Museum Association jointly launched a quantitative survey to determine the competence of green museum management.<sup>57</sup> The survey aimed to map the practices, motivations and opportunities of Hungarian museums in the field of environmental sustainability. A total of 116 museums (out of 855) responded to the questionnaire, of which 10 are located in the two counties under study. While the survey primarily focused on the environmental aspect of sustainability, it also included questions addressing the sustainable operation of museums, as well as their communication and educational activities related to sustainability. One of the most important results was that a large majority of institutions (84.3%) reported efforts to achieve the efficient use of water and energy. Nearly all museums

<sup>57</sup> Elérhető a “Zöld Múzeum” kutatási jelentés [The “Green Museum” research report is available], accessed August 21, 2025, <https://magyarmuzeumok.hu/cikk/elerheto-a-zold-muzeum-kutatasi-jelentes>

indicated that they engage in sustainable waste management and apply sustainability principles in the organisation of exhibitions and programs. By contrast, fewer museums incorporated sustainability into their educational and interpretive activities: only 44% reported implementing museum pedagogical programs centred on environmental sustainability, and just 25% organised exhibitions explicitly addressing this theme.

Building on the findings of the nationwide survey, the present study narrows its focus to examine the contribution of museums to sustainable cultural tourism in two specific counties: Borsod–Abaúj–Zemplén and Szabolcs–Szatmár–Bereg. To ensure comparability with the national results, the research employed a selection of questions from the nationwide survey addressing the environmental sustainability, social sustainability and communication practices of museums. The remaining questions have been added to address the lasting pillars of sustainability: economic and cultural.

## Research methodology

This article aims to answer the following research question: How do museums in Borsod–Abaúj–Zemplén and Szabolcs–Szatmár–Bereg counties support and promote sustainable cultural tourism in their regions? In order to answer the research question, an online questionnaire was conducted focusing on two out of the 19 counties of Hungary. The two counties were selected for this study on sustainable cultural tourism due to a combination of strategic geographic location, cultural significance and development potential, rather than current tourism performance alone. According to the 2023 data from the Hungarian Central Statistical Office, Borsod–Abaúj–Zemplén County ranked 8th, and Szabolcs–Szatmár–Bereg ranked 17th out of 19 counties in terms of guest nights in tourist accommodations.<sup>58</sup> Museums in the Borsod–Abaúj–Zemplén region attracted about 400,000 people annually, while those in the Szabolcs–Szatmár–Bereg region recorded 87,000 visitors in 2023.<sup>59</sup> In comparison, the museums in Budapest received a little over 5 million visitors that year.

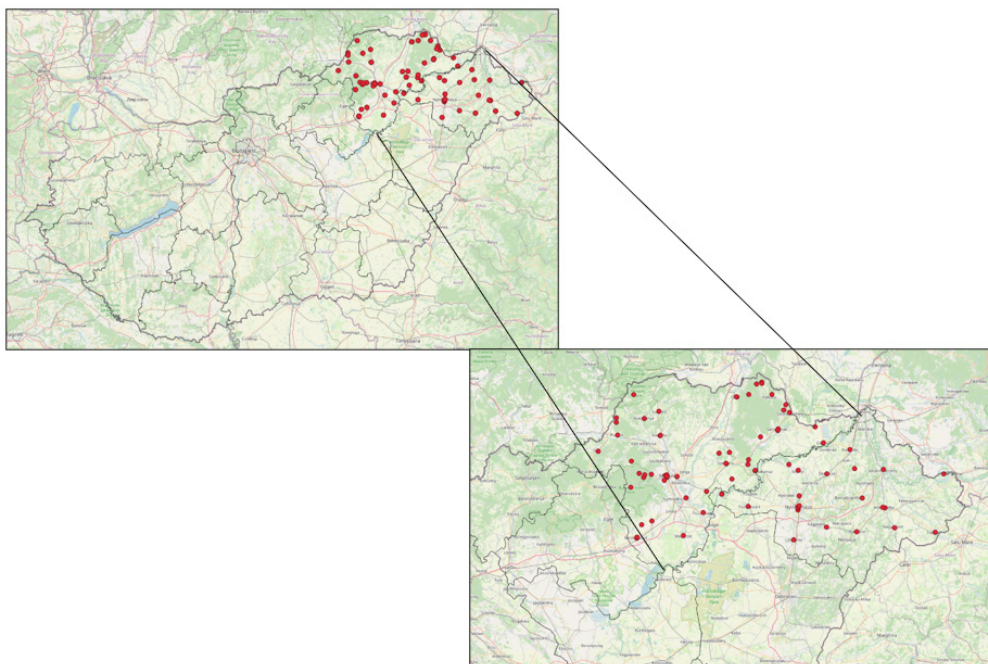
This presents a valuable opportunity to understand the barriers and prospects for tourism development in less-established regions. Investigating these counties allows the research to focus on how sustainable cultural tourism can be a tool for rural revitalisation and more sustainable local development. However, it is important to understand that sustainable cultural tourism can serve as a revitalising instrument, rather than merely boosting tourist numbers, which frequently results in overtourism and the degradation of vulnerable rural regions.

There are 85 museums in the two counties, of which 58% (49 institutions) are public exhibition sites (small institutions, with no collections) and 19% (16) public collections (Fig. 1). By contrast, only a limited number belong to the other three recognised categories of Hungarian museums: 13% (11) are territorial museums, which encompass multiple collection types within a defined geographical scope; 8% (7) are thematic museums, which focus on a single subject area but hold diverse types of collections; and 2% (2) are city museums, which maintain collections of various types with relevance to a specific county. Notably, national museums (with outstanding collection value) and specialised museums (defined as “museums

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<sup>58</sup> A turisztikai szálláshelyeken eltöltött vendégéjszakák száma vármegye és régió szerint [Number of guest nights spent in tourist accommodation by county and region], accessed August 21, 2025, [https://www.ksh.hu/stadat\\_files/tur/hu/tur0079.html](https://www.ksh.hu/stadat_files/tur/hu/tur0079.html)

<sup>59</sup> KultStat, Kulturális Statisztikai Adatgyűjtő Rendszer [Cultural Statistical Data Collection System], accessed April 2, 2026, <https://kultstat.oszk.hu/#/home/public>



**Fig. 1:** Location of museums in both counties (source: made by the authors).

of different disciplines with a national sphere and scope”<sup>60</sup>) are absent from both counties. The distribution of museum types mirrors that in Hungary, where small institutions predominate and large institutions with significant collections constitute a minority.

Data collecting was conducted online, between January and June 2025, using several outreach methods, including email, social media and telephone. Participation in the questionnaire was voluntary, and we utilised the responses solely in an aggregated manner, without specific attribution. Ultimately, 46 museums filled out our questionnaire. The collections of the participating museums mostly focus on ethnography, local history and the lives of notable Hungarian families and individuals from the region, representing the smallest segment of the Hungarian museum network: public exhibition sites and public collections. The sample included numerous regional houses storing collections of local history in both counties and districts, as well as two art galleries, seven regional museums, and four thematic museums, with the latter two categories being medium-sized institutions in terms of their collections. Overall, the sample was strongly characterised by small-scale, often resource-constrained institutions, many of which can be classified as micro-museums in terms of their size, staffing and operational capacity.

This composition reflects the evolution of the traditional structure of the Hungarian museum network. The establishment of the rural museum network began in the twentieth century as the middle classes started to create local cultural organisations within the regions. The objective of these group members was to gather, conserve and investigate local natural and artistic heritage, along with historical artefacts.<sup>61</sup> Subsequently, these private collections

<sup>60</sup> KÁLNOKY-GYÖNGYÖSSY, Márton. *Nation and Museum. Hungarian Museums and Legislation (1777–2010)*. Budapest: MIRIO.

<sup>61</sup> KOREK, György. *Gyűjtemények, múzeumok, muzeológia*, Budapest: Tankönyvkiadó.

established the foundation of rural museums when owners donated their collections to the community or founded museums derived from them. Therefore, in terms of institutional maintenance, the majority of museums within the two counties are administered by local municipalities. The second most common type of governing body is ecclesiastical institutions and the state, while a smaller proportion of museums are operated by foundations and private business organisations.

The survey consisted of 21 questions, designed around the three pillars of sustainability, completed with a fourth pillar: culture. As noted in the previous section, several of the questions related to environmental and social sustainability were adapted from the “Green Museum” research project. In addition, in the formulation of the survey questions, the researchers took into consideration the Standards of the Global Sustainable Tourism Council (GSTC), an organisation that aims to establish a common framework for sustainability in tourism.<sup>62</sup> The GSTC has developed a certification system applicable to all types of tourism organisations, structured around the four pillars, which destinations are expected to meet in order to advance sustainable development.

Within the social pillar, the questions focused on the extent to which museums contribute to strengthening local communities, their integration into the social fabric of the settlement and the ways in which they engage in communication with diverse audiences. Questions relating to the economic pillar examined the role of museums in supporting the local economy, including job creation and broader economic development. In relation to the environmental pillar, attention was given to how museums address environmental protection, mitigate negative impacts and adopt green practices in their daily operations. Finally, the cultural pillar explored the degree to which museums are grounded in local values and cultural traditions, their efforts in safeguarding cultural heritage, and their initiatives to promote local culture (Fig. 2).



**Fig. 2:** *The focus of the questions* (source: made by the authors).

The survey results were analysed with qualitative thematic and content analysis methods without the use of software.<sup>63</sup> During coding, emphasis was placed on the sustainability pillars, designated focus areas and major practices adopted by museums, as well as the prevalence of these activities.

## Results

The results, similar to the questions, are structured around the three traditional pillars of sustainability: environmental, social, and economic, supplemented by a cultural dimension (Table 2). Fifty percent of the museums surveyed did not have a formal written sustainability strategy. However, this absence should

not be understood as a lack of awareness; rather, sustainability had not yet been formally integrated into their institutional planning. Additionally, some museums are part of larger institutional networks; while the parent institution may have a formal sustainability strategy, individual museums within the network often do not maintain separate strategies of their own.

<sup>62</sup> Global Sustainable Tourism Council, accessed August 21, 2025, <https://www.gstc.org/>

<sup>63</sup> KUCKARTZ, Udo, RÄDIKER, Stefan. *Qualitative content analysis: methods, practice and software*. 2nd edition. Melbourne: SAGE, 2023.

In contrast, museums that have incorporated sustainability into their strategic documents tend to revise these plans regularly in order to reflect emerging developments and practices.

### *Environmental sustainability*

Environmental measures were present to varying degrees across museums. The majority (78%) implemented basic energy efficiency practices, particularly the use of LED or energy-saving lighting. However, more significant measures, such as upgrading insulation, windows and doors, were less commonly reported (33%), indicating possible resource or budget limitations. The use of renewable energy was infrequent (26%), with only one museum entirely powered by solar energy. Waste management was a more widely adopted area of practice: 76% of the surveyed museums reported using selective waste collection systems and 33% had installed outdoor compost bins. Electronic waste collection points were also reported by several institutions (33%).

In terms of sustainable transportation infrastructure, most respondent museums provide on-site bicycle storage (43%) and many are located in proximity to designated bicycle routes (65%). In 11% of the museums, the facilities also include electric vehicle charging stations, indicating a progressive diversification of environmentally friendly transportation alternatives.

Sustainable thinking is often at the heart of the design of new exhibitions, with some institutions reporting on the use of recycled (15%) or environmentally friendly materials (31%), reducing paper content by digital solutions such as QR guides (29%), and consciously avoiding energy-intensive components (49%). However, these procedures have not yet been applied consistently.

### *Social Sustainability*

The museums demonstrated a strong commitment to sustainability education and public awareness. Their educational programs frequently integrate themes of environmental responsibility and resource-conscious behaviour. Craft workshops using recycled materials or natural resources were commonly referenced, often drawing on local traditions and ecological knowledge. Due to the character of their exhibitions that frequently emphasise folk art, traditions and local crafts, numerous museums incorporate sustainability into their educational and public programs.

Community engagement was also a notable strength. Many museums host programs in collaboration with local schools, NGOs and civil organisations. Activities range from co-organised events to providing venues for external groups, reflecting the institutions' openness to serving as community hubs.

### *Economic Sustainability*

Support for the local economy was evident in several ways. Where present (30%), museum gift shops typically feature the work of local artists and creators. Furthermore, all responding museums consistently reported efforts to use local ingredients and products during their events. These practices help channel tourism spending back into the host communities, aligning with principles of sustainable economic development.

Employment patterns further highlighted museums' local development: 97% of employees live within the two counties examined, and 90% reside within the same municipality as the

museum they worked for. This local employment not only supports the regional economy but also strengthens social cohesion and institutional accountability.

### *Cultural Sustainability*

Cultural sustainability was fundamentally integrated into the majority of museums – unsurprisingly, given their missions and collections. Folk art, traditional crafts and regional heritage are extensively showcased in both permanent and temporary exhibitions, offering a natural platform for sustainability-related narratives. Among the museums surveyed, 50% exhibit local artists’ works. These content selections demonstrate an implicit but strong alignment with sustainable principles, especially regarding the preservation of both intangible and tangible local heritage.

Furthermore, most of the museums actively promote regional cultural identity through their public programs and events. By emphasising artisanal expertise and local narratives, these initiatives foster a deeper sense of place and community identity, which are crucial elements of sustainable tourism development.

**Tab. 2:** *Practical implementations of the sustainability pillars in the surveyed museums*

Sustainability Pillar	Focus Area	Key Practices / Findings	Observation / Frequency
<b>Environmental</b>	Energy efficiency	LED/energy-saving lights; upgrading insulation, windows or doors	Most museums; upgrades in fewer cases
	Renewable energy	One museum fully solar-powered; few museums using renewable sources like solar panels	Rare
	Waste management	Selective collection, outdoor compost bins	Common practice
	Green exhibitions	Use of eco/recycled materials, QR codes to reduce paper, low-energy design	Occasionally applied
<b>Social</b>	Education and awareness	Craft workshops using natural/recycled materials; sustainability-themed programs	Common practice
	Community engagement	Local schools, NGOs, civil society involvement; venue sharing, joint events	Widespread
<b>Economic</b>	Local economy support	Gift shops feature local products; use of local ingredients at events	Widespread
	Local economy support (employees)	97% staff from the counties; 90% in host city	Widespread
<b>Cultural</b>	Heritage-based sustainability content	Folk art, craft traditions integrated into programs and exhibitions (naturally present due to the museums’ collections)	Strong presence
	Cultural identity promotion	Programs and events reflect regional culture and artisanal knowledge	Strong presence

## Discussion

This research aimed to investigate the role of museums in Borsod–Abaúj–Zemplén and Szabolcs–Szatmár–Bereg counties in promoting sustainable cultural tourism, focusing specifically on the four pillars of sustainability. The results provide a multifaceted perspective on the role of museums in promoting sustainable tourism, highlighting both optimistic practices and substantial gaps.

The survey revealed that 50% of the museums do not have a written sustainability-related strategy. Consistent with other Hungarian research on sustainability in the museum sector, the importance of sustainability is not regarded as crucial for incorporation into the museums' strategic framework. The lack of defined sustainability objectives in institutional policy can be regarded as a barrier to systematic implementation.<sup>64</sup> In other European countries, the significance of sustainability in museums is increasingly recognised; however, museums in Central and Eastern Europe face difficulties in comprehensively integrating all three pillars of sustainability into their strategic frameworks.<sup>65</sup> In this geographical environment, museums predominantly shine in functions associated with the social pillar, similarly to our research findings.<sup>66</sup>

### *Environmental pillar*

A clear pattern emerged in environmental practices. The majority of examined museums have adopted cost-effective, high-impact measures such as LED lighting and targeted garbage collection. These actions indicate a preliminary commitment but involve minimal structural investment. In contrast, resource-intensive projects such as adopting renewable energy or building renovations are infrequent, indicating financial and infrastructural obstacles, especially for smaller regional organisations.

Insufficient financial resources can impede the execution of sustainability projects in museums. This constraint is frequently attributed to the limited financial resources of the governing entities, as well as the intrinsic unpredictability of the tender- and grant-based funding mechanisms upon which numerous museums in Hungary depend. In light of financial instability, prior research has shown that insufficient human resources pose a considerable barrier, further obstructing museums' capacity to implement sustainable solutions.<sup>67</sup>

### *Social pillar*

The social dimension appears to be a particular strength. The surveyed museums regularly engage local schools, NGOs and civil society in joint programming, and educational activities frequently incorporate sustainability themes through arts and crafts workshops and exhibitions. Most of the museums rely on collaborations within their direct geographic region, though such partnerships occasionally extend across regional borders.

Many museums curate and interpret aspects of traditional folk life, positioning them well to link these cultural expressions to the concepts of sustainability. The exhibited items and activities are often defined by their enduring design, resilience and dependence on natural

<sup>64</sup> NAGY-SÁNDOR, Museums for Sustainability... pp. 97–99; Elérhető a “Zöld Múzeum”... p. 3.

<sup>65</sup> FEHÉR, Zsuzsanna, ÁSVÁNYI, Katalin. Differences in sustainability approaches from the mission statements of museums – the case of CEE and other European contemporary art museums. In: *Journal of Contemporary Central and Eastern Europe* 31(3), 2023, p. 696.

<sup>66</sup> Ibidem.

<sup>67</sup> NAGY-SÁNDOR, Museums for Sustainability..., pp. 100–102.

resources, thus reflecting principles of resource efficiency and sustainability. While it is evident that museums cannot resolve all global challenges, they can aid in the advancement of an ideal future.<sup>68</sup> This is consistent with the role of museums as trusted cultural intermediaries,<sup>69</sup> capable of influencing public attitudes and behaviours in ways that extend beyond the tourism encounter.

### *Economical pillar*

Economic sustainability is also well represented. The strong reliance on local employment, with 97% of staff residing within the counties studied, supports regional livelihoods and enhances institutional accountability. Gift shops featuring local artisans and catering that uses locally sourced ingredients further demonstrate the economic embeddedness of museums. As far as economic sustainability is concerned, museums need to strive for greater sustainability due to their potential negative environmental impact. Typically, museums consume substantial resources, such as energy and water, and generate significant waste. By measuring these environmental effects, museums can identify areas for improvement in reducing their ecological footprint.<sup>70</sup> Ideally, the institution can save money by putting policies in place to decrease these environmentally negative effects.<sup>71</sup>

### *Cultural pillar*

The cultural pillar is also a strength of the examined museums. By conserving and showcasing folk art, crafts and intangible heritage, museums not only protect cultural traditions but also augment the authenticity and uniqueness of tourism experiences, attributes that are increasingly esteemed in destination competitiveness.<sup>72</sup> Although culture-driven regeneration efforts mostly focus on major cities and urban areas, local folk culture and traditions in rural settings significantly contribute to economic development, social cohesion and community pride.<sup>73</sup> Today, museums are recognised as catalysts for the social and economic advancement of a city or region. Cultural heritage, together with museums, is acknowledged as a catalyst for sustainable development and economic progress, especially through its impact on tourism and place branding.<sup>74</sup>

Overall, the results indicate that although museums do not formally engage with sustainable thinking, the practical examples and responses demonstrate their active involvement in sustainability on a daily basis. Prior literature in Hungary suggests that museums have challenges in incorporating sustainability into their strategic documents; nonetheless, sustainable thinking has now become a fundamental aspect of their concerns, contrary to past findings.<sup>75</sup>

The insufficiency of human and financial resources in the Central and Eastern European region constitutes a significant obstacle to implementing high-volume sustainable solutions,

<sup>68</sup> ZIEBÍŃSKA-WITEK, Anna. Can the Museum Be an Agent of Social Change? A New Model of the Functioning of the Museum in the Twenty-First Century. In: *Muzeológia a kultúrne dedičstvo* 11(3), 2023, p. 25.

<sup>69</sup> MCGHIE, *Museums and the Sustainable Development Goals...*, p. 33.

<sup>70</sup> NAGY-SÁNDOR, *Museums for Sustainability...*, p. 46.

<sup>71</sup> MCGHIE, *Museums and the Sustainable Development Goals...*, pp. 34–35.

<sup>72</sup> RICHARDS, Greg. Cultural tourism: A review of recent research and trends. In: *Journal of Hospitality and Tourism Management* 36, 2018, p. 15.

<sup>73</sup> ŚRODA-MURAWSKA, Stefania et al. Culture-led regeneration as a vital instrument for preserving the cultural heritage of historical parks in Poland. In: *Muzeológia a kultúrne dedičstvo* 9(1), 2021, pp. 45–46.

<sup>74</sup> HEIDENREICH and PLAZA, *Renewal...*, p. 1450.

<sup>75</sup> NAGY-SÁNDOR, *Museums for Sustainability...* p. 97.

a conclusion corroborated by our research.<sup>76</sup> A significant number of sustainability-related practices are contingent upon the financial capabilities of the institution, particularly concerning the environmental pillar, which necessitates greater funding.

As regards the economic pillar, museums can make a significant contribution to local and regional economic development. The museums studied engage in various ways to advance sustainable cultural tourism. This finding aligns with the well-documented economic contributions of cultural and creative industries globally.<sup>77</sup>

The museums surveyed perform particularly in relation to the social and cultural pillar, aligning with their broader vision and goals. Museums are embedded within the local community, engaging with its representatives and drawing upon local traditions, heritage and values. Previous studies have emphasised the social responsibilities of museums, indicating that outside of Central Europe they also serve as agents of change and social transformation.<sup>78</sup> The social pillar is particularly crucial in rural and small urban regions, where population decline and urban–rural disparities can lead to substantial challenges.<sup>79</sup>

The findings indicate that museums are under-recognised, but significant, contributors to sustainable tourism. They currently provide substantial contributions across the environmental, social, economic and cultural spheres; however, more formalisation of strategy, investment in high-impact infrastructure, and professional education might markedly augment their influence. With their educational authority, community integration and cultural resources, museums are ideally positioned to act as catalysts for sustainable tourism growth.

An important consideration emerging from the findings is the question of limits to tourism growth. While museums are often interpreted as drivers of regional development, particularly in underdeveloped areas, an uncritical increase in visitor numbers may pose risks. Given the small-scale and resource-constrained nature of many surveyed institutions, their capacity to accommodate increased tourist flows remains limited. This highlights the importance of aligning tourism development strategies with local carrying capacities, in order to avoid potential negative impacts on cultural heritage and community life.

## Conclusions

This study has analysed the role of museums in promoting sustainable tourism, utilising a framework grounded in the three traditional pillars of sustainability – environmental, social and economic – enhanced by a cultural dimension that underscores its critical importance beyond museums.

The results indicate that although half of the assessed institutions lack explicit sustainability strategies, numerous museums are actively implementing sustainable practices. These acts encompass energy efficiency initiatives, waste management, community-focused educational programs, local economic support and the enhancement of the area's cultural identity.

<sup>76</sup> POP, Izabela, BORZA, Anca. Factors Influencing Museum Sustainability and Indicators for Museum Sustainability Measurement. In: *Sustainability* 8(1), 2016, p. 8; NAGY-SÁNDOR, Museums for Sustainability..., pp. 97–104; FEHÉR and ÁSVÁNYI, Differences in..., p. 689.

<sup>77</sup> HEIDENREICH and PLAZA, Renewal...; GUSTAFSSON, Christer and IJLA, Akram, Museums – A Catalyst for Sustainable Economic Development in Sweden. In: *International Journal of Innovative Development & Policy Studies*, 5(2), 2017, pp. 1–14.

<sup>78</sup> NAGY-SÁNDOR, Museums for Sustainability..., p. 74; FEHÉR and ÁSVÁNYI, Differences in..., pp. 696–697.

<sup>79</sup> ROBERTS, Elisabeth, TOWNSEND, Leanne. The Contribution of the Creative Economy to the Resilience of Rural Communities: Exploring Cultural and Digital Capital. In: *Sociologia Ruralis* 56(2), 2016, p. 199.

The investigation highlights an inconsistent integration of sustainability. Environmental campaigns frequently focus on low-cost, easily executable steps, whereas more resource-intensive measures, such as the use of renewable energy, are infrequently pursued.

Museums have significant power in social and cultural aspects, serving as community centres, educators, and guardians of heritage. Their economic contributions, such as local employment and assistance for regional producers, underscore their integration into local development processes.

The results are significant from three crucial points. Firstly, it is evident that, despite being situated in underdeveloped rural parts of Hungary, these museums contribute significantly to the development of their regions. Consequently, subsequent research should concentrate on rural areas and smaller cities, where sustainable development is more essential than in well-developed regions. Secondly, the study emphasises that museums may serve as a valuable resource for promoting sustainable cultural tourism, particularly in Europe, where they possess a vast network and play a significant role in the cultural tourism sector. Thirdly, the cultural pillar must be scrutinised not just in the context of museum-related studies but also in relation to the pillars of sustainability, as the existence of the other three pillars is contingent upon culture.

Museums should improve their impact on sustainable tourism through three strategic transformations:

1. Formally incorporating sustainability objectives into institutional plans would establish a cohesive framework for action. This approach would define how museums might achieve sustainability internally, through operations and programming, as well as externally, by promoting sustainable behaviours within the broader community.
2. Focused investment and policy assistance are essential to overcome financial and infrastructural obstacles to high-impact environmental efforts.
3. A more comprehensive understanding of sustainability practices is required, alongside an enhancement of current efforts and best practices regarding the pillars of sustainability.

Further to these points, the advancement of collaboration and dissemination of best practice, already underway in Hungary, will facilitate the professional growth and knowledge exchange among museum professionals.

By leveraging their existing strengths, particularly in education, community engagement and cultural preservation while addressing gaps in strategy, infrastructure and communication, museums can consolidate their position as vital actors in sustainable tourism. Overall, it is evident that museums are actively contributing to sustainable cultural tourism, despite facing various challenges. Museums are sensitive to and reflect on the changing world, highlighting the need to provide them with greater support and formal recognition for their efforts.

The primary limitation of this study lies in its geographically restricted sample, as the analysis draws only on Hungarian museums, thereby limiting the generalisability of the findings. Moreover, of the 85 museums contacted across the two counties, only 46 completed the questionnaire. Despite multiple outreach attempts via email, social media and telephone, several institutions could not be reached. In some cases, very small museums – usually public exhibition sites and public collections – lacked permanent staff and the maintaining bodies did not consider themselves sufficiently competent to complete the survey. Another significant

limitation is the reliance on self-reported data, which may also have introduced bias, as museums could overstate or underreport their sustainability practices.

Future research should further explore the potential and everyday practices of museums. As long-standing institutions with histories extending back centuries, museums possess a remarkable capacity to adapt to evolving societal expectations. Their longevity has enabled the development of extensive and well-recognised networks. Leveraging and fully understanding this potential is not only the responsibility of museologists but also of professionals in the tourism sector and representatives of the public sector.

Additionally, further research should be conducted to investigate disadvantaged regions, along with medium-sized and small cities, to obtain a full understanding of the operations and capacities of museums. The sustainability pillars are crucial not just due to worldwide trends but also because of the environmentally harmful practices of museums and the tourism industry. Consequently, enhanced efforts are required to guarantee sustainable operations within both sectors.

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