forests

MDPI

Article

Forests and Their Related Ecosystem Services: Visitors' Perceptions in the Urban and Peri-Urban Spaces of Timișoara, Romania

Remus Crețan, David Chasciar and Alexandru Dragan *

Department of Geography, Faculty of Chemistry, Biology, Geography, West University of Timișoara, 300223 Timișoara, Romania; remus.cretan@e-uvt.ro (R.C.); david.chasciar03@e-uvt.ro (D.C.)
* Correspondence: alexandru.dragan@e-uvt.ro

Abstract: Urban and peri-urban forests serve as significant drivers, conferring benefits to humans through engagement with their ecosystems. These benefits encompass recreation, cognitive development, introspection, the acquisition of knowledge systems, social relations, and aesthetic values. The aim of this study is to examine the urban and peri-urban ecosystem services by offering new insights into visitors' perspectives on the recreational, aesthetic, and spiritual values of forests in the city of Timișoara and its peri-urban area. The study focuses on two forests: Padurea Verde, the largest forest in Timișoara, and the Giroc Forest, one of the most frequently visited forest areas in the peri-urban zone of Timișoara. Thirty-six in-depth interviews were conducted with visitors to the two selected forests in September 2024. The findings indicate that visitors derive benefits from the ecosystem values of these forests, including recreational, aesthetic, and cultural values. However, there are also feelings of disappointment related to the lack of cleanliness and the presence of an excessive number of stray dogs in the forests. The findings also indicate a necessity for the implementation of organized activities, such as sports competitions and more children-oriented events, while discouraging the organization of festivals and the excessive use of noise in forests. Furthermore, they suggest that forests should be maintained in a relatively undisturbed state. These findings could prove beneficial as future perspectives for local practitioners, enabling the continued provision of complex ecosystem services and recreational values by urban and peri-urban forests.

Keywords: urban and peri-urban ecosystems; forests; visitors' perceptions; Timișoara; Romania

check for updates

Citation: Crețan, R.; Chasciar, D.; Dragan, A. Forests and Their Related Ecosystem Services: Visitors' Perceptions in the Urban and Peri-Urban Spaces of Timișoara, Romania. *Forests* **2024**, *15*, 2177. https://doi.org/10.3390/f15122177

Academic Editor: Pedro Álvarez-Álvarez

Received: 20 October 2024
Revised: 23 November 2024
Accepted: 9 December 2024
Published: 11 December 2024

Copyright: © 2024 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

1. Introduction

Visitor satisfaction with urban green spaces is helpful for the sustainable development of urban and peri-urban planning, and can increase people's awareness of environmental protection and even people's psychological well-being [1]. Because urban and peri-urban ecosystems are under pressure as a result of current rapid global urbanization [2,3], urban and peri-urban ecosystem services are those ecosystem services provided in urban and peri-urban areas by green infrastructure including trees, parks, street vegetation, allotments, botanical gardens, green roofs as well as lakes and wetlands [4,5]. Such services play an important role in promoting sustainability and well-being in cities and their influencing of regional areas [6,7]. Furthermore, the utilization of urban green spaces, including parks, gardens, and green roofs, can facilitate the removal of airborne pollutants and enhance air quality, thereby mitigating the adverse health effects associated with pollutant exposure [8–16].

Urban landscapes from the ecosystem services perspective have been reflected in numerous studies [2–7,17–19]. These studies include urban green development, nature-based solutions, and practical implications for urban planners. On the other hand, peri-urban landscapes have also been studied in relation to ecosystem services [20–28]. However, most of the latter studies are based in the context of sustainable planning issues, with

the exception of several studies [20,22] that have dedicated their analysis exclusively to ecosystem services in peri-urban areas.

Given that the majority of previous studies in forests and their related ecosystem services have concentrated on either urban or peri-urban ecosystems, this study seeks to advance existing debates by integrating these two areas of focus (i.e., urban and peri-urban) into the case of the East-Central European city of Timișoara and its neighborhoods. The aim of this study is to examine the urban and peri-urban ecosystem services by offering new insights into visitors' perspectives on the recreational, aesthetic, and spiritual values of forests in the city of Timișoara and its peri-urban area. The study focuses on two forests: Padurea Verde, the largest forest in Timișoara, and the Giroc Forest, which is one of the most frequently visited forest areas in the peri-urban zone of Timișoara.

Our research questions are the following:

(1) What are the benefits of the recreational, aesthetic, and spiritual values offered by the urban and peri-urban forests, and what are the negative perceptions around the current management of urban and peri-urban forests?
(2) How could urban and peri-urban forests be better preserved in the future and what solutions do visitors offer toward more sustainable urban and peri-urban ecosystem services?

Besides advancing the current international knowledge on urban and peri-urban ecosystem services [1–28] by bringing insights into visitors' perceptions on the benefits of the recreational, aesthetic, and spiritual values offered by the urban and peri-urban forests in an East-Central European context, our study adds new information to Romanian studies on ecosystem services as well. The majority of previous geographical studies on Romanian forests have been conducted in conjunction with other forest-related analyses, including forest mountain dendrochronology and snow avalanche impact on mountain forests [29–31], as well as ecosystem services studies focused on urban lakes [32] and stakeholder involvement in nature-based solution planning [33]. Therefore, this study complements existing urban and peri-urban ecosystem services in Romania [32,33] highlighting the perception of forest visitors in terms of recreational, aesthetic, and spiritual values of forests in Timișoara and its surrounding area.

Our study is structured in five sections. First, we present a literature review, then we outline the methods and study area. Finally, some results, discussion, and conclusions are presented.

2. Theoretical Framework

The engagement with urban and peri-urban forests offers significant benefits to humans through interaction with the surrounding ecosystems. Such benefits include, but are not limited to, recreation, aesthetic appreciation, cognitive development, introspection, social relations, and aesthetic values. In return for the benefits that humans derive from nature, it is also possible for humans to serve nature. The concept of ecosystem services was first introduced several decades ago in order to counterbalance the so-called utilitarian perspective that ecosystems should maintain the separation of humans from nature [34–36].

Urban and peri-urban ecosystem services are crucial forms of services that promote sustainability and well-being [2–7,17–24]. For instance, urban and peri-urban forests and parks are places where visitors benefit from fresh air and undertake recreational, aesthetical, and cognitive activities. However, when parks and forests are affected by pollution, they are not so beneficial to humans and people have to take action against such practices.

Green spaces and green infrastructure [37], through the presence and opportunities provided by urban and peri-urban forests, play an essential role in the world's major cities. They can improve both environmental quality and quality of life through the social function of forests [38]. How forests are used, through their protective, productive, or social functions [39,40], is particularly important and considered in sustainable and smart urban planning [41]. Ecological studies on urban and peri-urban forests have recently been conducted worldwide from a number of perspectives: the role of forests for

human health [42,43], the role of forests in microclimatic stabilization [44], the role of invertebrates [45], the recreational role of forests [46,47], and the role of ecosystem services provided by green and blue spaces, forests, and waters [48].

The social function of forests is of equal importance [49], whether considered from the perspective of the economic value of green spaces [50] or the recreational potential of forests and cities as tourist destinations [51,52]. Furthermore, studies connecting social segregation and urban forests are of equal importance. These studies reveal territorial disparities caused by the higher share of green spaces in richer communities compared to poorer communities [53], or how people use green spaces [54].

As with urban forests, peri-urban forests serve as locations for recreational activities [55], conferring upon residents a range of social and ecological advantages [56]. Urban planning studies are currently being conducted with a view to improving human well-being and quality of life, while also taking environmental and physico-geographical variables into account [57]. The studies in question feature a number of geographical characteristics, including an analysis of the ways in which these spaces are planned in order to strengthen a smart and green city [58], with sustainable and thriving urban forests [59].

Globally, institutions in the US, UK, and China conduct the most studies on green spaces [60,61]. On the other hand, in South American cities, the high growth of urban forests and the services provided by these ecosystems is asserted [62]. Similarly, in European countries, urban green spaces are growing, and their cultural and social benefits are increasingly being studied [63]. The importance of studies throughout Europe is also due to the high level of urbanization [4]. An important study for the Eastern European region was carried out in a peri-urban forest near Cluj-Napoca, where the increasing needs of citizens for green spaces were noted [64].

The peri-urban area has the potential to serve as an exemplar of urban development, offering significant socio-economic benefits and opportunities for sustainable growth [65,66]. Consequently, the study of peri-urban forests is of significant importance in order to gain insight into and enhance the quality of life and development of peri-urban areas [67]. The cultural and social benefits of urban and peri-urban forests for citizens can be identified through such studies [68]. For instance, in urban zones afflicted by traffic and pollution, forests can furnish ecosystem and cultural benefits and services to assuage the associated issues [69,70]. In many instances, the younger peri-urban area exhibits a greater proportion of green space and a greater range of ecosystem services than the urban area [71,72]. However, it is not as extensively researched [73]. It is regrettable that these spaces are subject to the rapid and haphazard expansion of the municipal area [74–76]. Therefore, in both types of forest, green spaces, and the services they provide may be subjected to pressure, which could potentially lead to a reduction in the benefits they offer [77].

The multifunctionality of urban forests can be attributed to their capacity to address both environmental and social/cultural needs simultaneously, thereby providing a solution to a range of ecological and social issues [78,79]. Such forests may be defined as the consequence of human intervention in the natural environment, whereby social and cultural activities are superimposed upon biological processes. This results in what is termed a 'biocultural space' [80]. Recreational visits to these spaces may be motivated by factors such as stress, chemical pollution [81], noise [82], and a lack of movement, which are prevalent in urban life [83]. It can be reasonably deduced that the atmospheric air in forests could have a beneficial effect on visitors. For example, Dudek, Marć, and Zabiegała [12] investigated the chemical composition of air in Nemoral Scots pine and beech forests in Poland with the objective of identifying compounds belonging to the terpene group. In light of the presence of both naturally occurring terpenes and anthropogenic compounds in forest air, the authors posit that existing characteristics of forest air could give rise to a fruitful interdisciplinary discourse on the integration of forests as a form of medical treatment into public health management initiatives.

Cultural or social ecosystem services are non-material benefits that can improve tthe quality of life [84] and the environment [85]. Several studies support the importance and

social, urban, and planning character of these ecosystem services over their ecological character [86–89]. Urban forests, with ecosystem services such as the presence of large trees, can also have effects on increasing the value of surrounding real estate [90]. In their assessment of the ecosystem services of Oslo Woodland, an important forest surrounding Oslo, Berglihn et al. [13] argue that there were multiple historical changes in the shaping of forest uses and the composition of ecosystem services in Oslo Woodland. They measured ecosystem services and assessed trends in these ecosystem services over the past five decades. Despite an increase in cultural changes, the key issues of change shaping current ecosystem services are institutional, technological, and cultural factors. The availability of water and opportunities for tourism are of particular importance to the local Oslo population. However, there has been a decline in the provision of habitats and in the provisioning of services over the past fifty years.

Conversely, Wang et al. [14] investigated the role of urban green spaces in the provision of cultural ecosystem services (CES) in relation to diverse landscape characteristics and land-use contexts. A comparison was made of the CES of 20 urban forest areas in Helsinki, Finland. The cultural ecosystem services (CES) were evaluated through a survey of visitors' perceptions of their CES experience. In forests exceeding 20 hectares, visitors expressed high satisfaction with CES, primarily due to the physical health benefits derived from prolonged physical activity. Conversely, in smaller urban forests, visitors reported greater appreciation for cultural heritage and even psychological restoration. The authors posit that the maintenance of expansive urban forests is a more efficacious strategy for the promotion of CES.

Interestingly, comparing perceptions of forests across generations might reveal divergent opinions between teenagers and adults. In this regard, Hegetschweiler et al. [15] conducted a comparative analysis between adolescents and adults with respect to the utilization and perception of ecosystem services, encompassing motives for forest visits and forest-related activities, as well as constraints on visitation. The authors argue that the results of a nationwide online survey conducted in 2016 using a large Swiss panel demonstrate that teenagers visit forests less often than adults. Furthermore, they suggest that there are differences in preferences and activities between the two age groups. They posit that younger people engage in more active forms of forest use, whereas adults tend to utilize forests in a more psychological or contemplative manner. It can be concluded that teenagers have different needs than adults with regard to the utilization of cultural ecosystem services derived from forests. Consequently, they must be considered as a distinct user group in the context of the management of recreational forests.

A further significant debate within the field of urban ecosystem services is the comparison of perceptions of urban natural parks and urban neighborhood parks. The Delphi technique was employed by Jang-Hwan et al. [16] to elicit expert opinions on the categorization of ecosystem services provided by urban forests. The study in question investigated the preferences for ecosystem services offered by various types of urban forests in South Korea. The authors analyzed preferences for seven ecosystem services, which include microclimate regulation and air quality improvement, food provision, water flow regulation, noise reduction, landslide moderation and prevention, biodiversity enhancement, recreation and health services. The results indicated that there were no significant differences in preferences between urban natural parks and urban neighborhood parks, suggesting that residents of Seoul view them as similar. However, a stronger preference was observed for urban forests with a higher proportion of fruit trees and deciduous trees, a denser tree canopy, increased leaf area, greater spacing between trees, and a higher level of species richness.

In some regions, studies have been conducted on the impact of the pandemic on the population through the frequency and purpose of visits to urban and peri-urban forests [91]. In Germany, for example, visits to these forests increased significantly during the pandemic due to the stress reduction benefits [92]. Green space development can also be achieved through urban regeneration projects [93]. The restoration, development, and implementation of urban forests are favorable in certain areas, depending on the

density of access routes, economic activities, population density, and physico-geographical characteristics [94–96]. These regeneration projects can also use and enhance the ecosystem services provided by less planned, informal, unplanned green spaces [97].

One solution to the detrimental phenomenon of urbanization is the growth and development of urban forests through the voluntary financial efforts of those affected and their involvement in development, as is happening in some countries [98,99]. At the same time, the active participation of citizens in decision making about these spaces can improve and direct forest development toward the people rather than for the benefit of the city and the authorities [100]. Although the actions of the authorities, and planning and development of forests, are particularly important, they may to some extent affect the cultural or ecological benefits of the ecosystem present in the forests studied [101]. The services provided by forests through their social, protective, productive, and societal functions [102] can be improved and protected through "solutions taken from (natural) nature" [103,104].

In turn, community forests or rural parks provide important ecosystem services, create opportunities for local people, and can be transformed into forests with peri-urban functions and services [105–107]. The study of peri-urban forests takes into account the rural–urban character, the characteristics of the city, and those of the surrounding area [108].

Once the benefits of a forest are identified, and from the respondents' point of view, they can be integrated and contribute to urban and peri-urban development plans and strategies [109,110]. The representation of forests on maps contributes to the provision of green spaces according to the needs and social preferences of residents, in specific neighborhoods or peri-urban areas [111,112]. Through various studies, we can arrive at a model of an urban forest, preferred by the majority of the visitors' respondents, taking into account certain variables: the type of trees and their importance [113], the demographic profile of the visitors, the activities they carry out [114], the use of forests by different ethnic groups [115]. For visitors, the larger the area of forests, the more services and benefits they provide [116].

3. Materials and Methods

The initial methodological phase entailed a synthesis of contemporary international literature that emphasizes the significance of urban and peri-urban forests as a multifaceted ecosystem service [2–7,20–28]. In this context, particular attention was paid to the ecosystem values of forests in terms of their recreational, aesthetic, and cultural significance. Additionally, visitor perceptions of forests and the organizational and maintenance aspects of forest management were considered.

The first analytical approach to the forest was a direct, on-site participatory observation of the two forests, which was recorded in an observation sheet. In this manner, each forest was observed in its entirety by the researchers, including the access paths, all paths, forest edges, forest center, water areas, and places containing landscaped areas. The observation sheet comprised 18 indicators, including aspects of accessibility, landscape biodiversity, tranquility, recreational services, and recreational infrastructure. Additionally, commercial, cultural, religious, tourism, sports, and educational services were assessed. Finally, walking trails, water spans, and safety issues were evaluated. For each of these, the presence or absence of elements, as well as brief observations, were noted for each forest. This resulted in a comparative summary table.

Secondly, cartographic methods were employed to identify pertinent forests within the urban area of Timișoara. In order to achieve this, vector data from two complementary sources were downloaded in the ArcGis Pro 3.1 program: the Corine Land Cover model of the European Union [117], and geospatial data of the Open Street Map community [118], which are available for download on the Geofabrik portal [119]. The data were processed in ArcGis Pro software, which enabled the positioning of forests and green spaces in and around Timișoara, as well as the calculation of their areas and distances to nearby services.

The urban forest "Pădurea Verde" (Green Forest), situated on the outskirts of Timișoara but within the city limits, and the peri-urban forest Giroc, located in the municipality of

Giroc, were selected as case studies. To this end, a field observation was undertaken through the two forests in question, with a view to mapping their principal areas of recreation and service provision. A comprehensive inventory and photographic documentation of the institutions situated within the vicinity of these forests was conducted, including educational facilities such as high schools, cultural institutions such as museums and memorials, places of worship, and recreational facilities such as bicycle trails, picnic areas, playgrounds, and public dining establishments.

The subsequent phase of the study involved conducting semi-structured interviews with visitors to the two forests. The interview grid comprised 17 questions, including 1 identification question (i.e., age, gender, neighborhood of residence) and 3 frequency questions (frequency of visits, means of access, companions, and activities undertaken). The remaining 13 questions were perception-based. The latter set of questions pertained to visitors' perceptions of the condition of the forest, the services it offers, opportunities, dysfunctions, and proposals for further development and conservation.

In September 2024, 36 interviews were conducted with visitors to the two forests, comprising 17 in Green Forest and 19 in Giroc Forest. The interviews were carried out at varying times of the week and day. All respondents were informed about the research project and gave their consent to participate in the interview. All respondents were anonymized. The number of male and female respondents was almost equal, with 19 males and 17 females. The age range of respondents was also fairly balanced, with nine individuals under 30 years of age and six over 60 years of age. Additionally, 25 respondents resided within the city of Timișoara. The complete structure of respondents is presented in Table 1.

Table 1. Interview respondent statistics.

Respondent Code	Gender	Age	Area of Origin	Scope of Visits
I1	Male	40–50	Peri-urban	Runner
I2	Female	30–40	Timișoara N-E	Walking, walking with dogs
I3	Female	40–50	Timișoara N-E	Walking, walking with dogs
I4	Male	>70	Timișoara Center	Pensioner. Visit Museum
I5	Female	>70	Rural	Pensioner. Visit Museum
I6	Male	50–60	Timișoara S-E	Museum PR
I7	Female	20–30	Timișoara N-E	Tourism student. First time in the Museum
I8	Female	30–40	Timișoara N-E	Walk, run, relax
I9	Male	20–30	Timișoara N	Walk with kids
I10	Female	20–30	Timișoara N	Walk with kids
I11	Female	>70	Timișoara Center	Retired. Relaxation. For fresh air
I12	Female	40–50	Peri-urban	Relax
I13	Male	40–50	Peri-urban	Relax
I14	Male	>70	Timișoara S	Grilling
I15	Female	50–60	Timișoara S	Grilling
I16	Male	40–50	Timișoara S-E	For the monastery. Religious visits
I17	Male	20–30	Timișoara N-E	For the monastery. Religious visits
I18	Male	30–40	Forest inhabitant	Monah
I19	Female	40–50	Timișoara Center	For the monastery. Walks after Mass
I20	Male	30–40	Timișoara Center	Fishing
I21	Male	30–40	Timișoara Center	Fishing
I22	Female	30–40	Peri-urban	Bicycling, fishing, barbecue, Timis river
I23	Male	30–40	Peri-urban	Bicycling, fishing, barbecue, Timis river

Table 1. *Cont.*

Respondent Code	Gender	Age	Area of Origin	Scope of Visits
I24	Male	40–50	Peri-urban	Bike, barbecue, relax
I25	Male	50–60	Timișoara S-V	Bike, barbecue, relax
I26	Female	60–70	Timișoara S-E	Barbecue, relaxation
I27	Male	>70	Timișoara S-E	Barbecue, relaxation
I28	Female	30–40	Timișoara S	Restaurant, forest, Perseids
I29	Female	30–40	Timișoara S	Bicyclist. Entrance.
I30	Male	30–40	Timișoara S	Bicyclist. Entrance.
I31	Male	20–30	Rural	Forestry high school graduate
I32	Female	20–30	Peri-urban	Student. Walks
I33	Male	30–40	Timișoara S	Bike, blanket, picnic
I34	Male	50–60	Forest	Forester/forest manager
I35	Female	20–30	Timișoara N-E	Cycling, walking
I36	Female	20–30	Timișoara Center	Cycling, walking

Following the completion of the coding and qualitative analysis of the interviews, a quantification of the responses was conducted. Accordingly, six quantifiable dimensions were selected to enhance the synthesizability of the analysis. These included the frequency with which respondents visit the forest, the aspects they value about the forest, the evaluation of the threats, the advantages that forests have over urban parks, the facilities that should be developed in the forest, and the things that should be more strictly controlled. These items were assessed for each interview and tabulated.

Subsequently, all interviews were faithfully transcribed, and the three authors discussed the main themes emerging from the sum of the interviews. Three main themes emerged, and each was assigned a color, with the entire body of interviews being thematically and color-coded according to Bryman's methodology [120]. The entire data collection and methodological study of this article was approved by the Scientific Council of University Research and Creation of our university (no. 84544).

4. Study Area

The two forests under consideration are situated at diametrically opposed points in Timișoara (see Figure 1).

Pădurea Verde (Green Forest) is located in the peripheral region of the city, in its north-eastern extremity, at an approximate distance of 5 km from the city center. The forest covers an area of over 650 hectares, which is approximately three times the total area of all parks in the city of Timișoara. One of the most notable attractions within the forest is the Banat Village Museum. The museum's foundation was established in 1902, with the inaugural open-air exhibition opening to the public in 1971. It illustrates aspects of the historical development of the cultural and civilizational landscape of the Banat region. Additionally, the museum contains a place of worship, which also serves as an exhibition space. Additionally, the museum features a temporary exhibition space and a museum stage. The museum provides a series of open-air events, including popular music festivals and folk festivals, among others [121]. Another noteworthy feature is the former zoo, which was established in the 1980s on approximately 6 hectares and is currently no longer operational.

Furthermore, the forest area includes educational facilities, such as the "Casa Verde" Forestry and Agriculture Technological High School in Timișoara. This institution has been operational since 1885, although historical evidence suggests that it is a successor to an 18th-century hunting lodge that was subsequently transformed into a restaurant or social venue, and later became a forestry school [122]. In addition, the Green Forest

has recently hosted a number of contemporary music festivals and concerts. The Plai Festival was held at the Village Museum [123], while the Codru (Forest) Festival was held in 2024 on the grounds of the former Zoological Garden [124]. Additionally, the entrance to the Green Forest features a monument to anticommunist resistance and a restaurant with an events hall that can accommodate approximately 200 guests (Figure 2). The Green Forest is situated in close proximity to a number of large industrial production units, which collectively employ several thousand people in the automotive tire manufacturing industry. This has the potential to give rise to significant concerns regarding air pollution, which have been the subject of ongoing public debate.

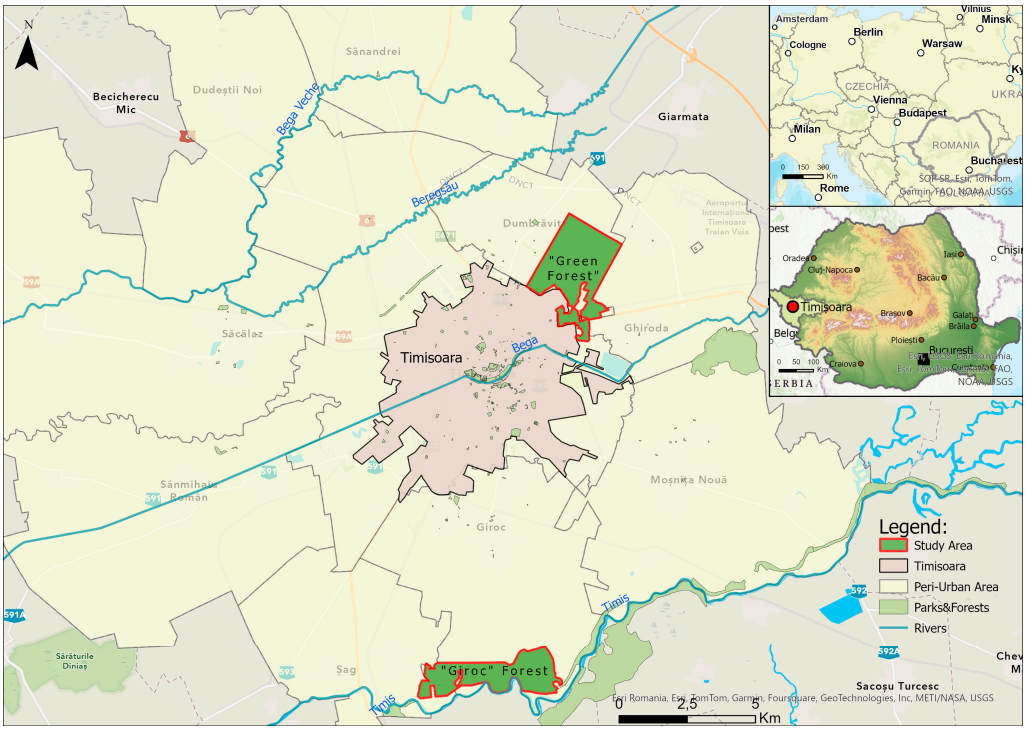


Figure 1. Positioning of the analyzed forests in relation to the city of Timișoara. Data sources [107–109].

The Giroc Forest is situated approximately 12 km from the center of Timișoara, encompassing an area of over 5.5 km^2 (550 ha). It is bordered to the south by the Timis River, an important waterway in Romania. The forest encompasses two monastic establishments: an Orthodox monastery (Șag-Timișeni) and a Greek-Catholic monastery. The latter is a monastic community that was established in 2012 by two monks. The community has stated that its objective is to establish an oasis of tranquility, a place of retreat, as well as a venue for ecumenical meetings and spiritual guidance in an open-air setting within the forest. The Timis River provides a variety of services, including fishing, relaxation, recreation, and swimming. Despite its exposure to geomorphological hazards, a recreational area has been consolidated on the river's high meadow, right on part of the first terrace. This has been financed by the municipality of Giroc and comprises tables, benches, and barbecue areas. Additionally, the meadow area encompasses the "Lunca Timișului-Bazoșul Nou" Bicycle Route 5, which is part of the "Eco Timiș" tourist project and connects numerous significant tourist destinations in the Timișoara area [125]. In recent years, a rest area has been established on the periphery of the forest, with the collaboration of the Municipality of Giroc and a group of volunteers. Additionally, in recent years, a restaurant with a terrace accommodating approximately 120 seats has been established.

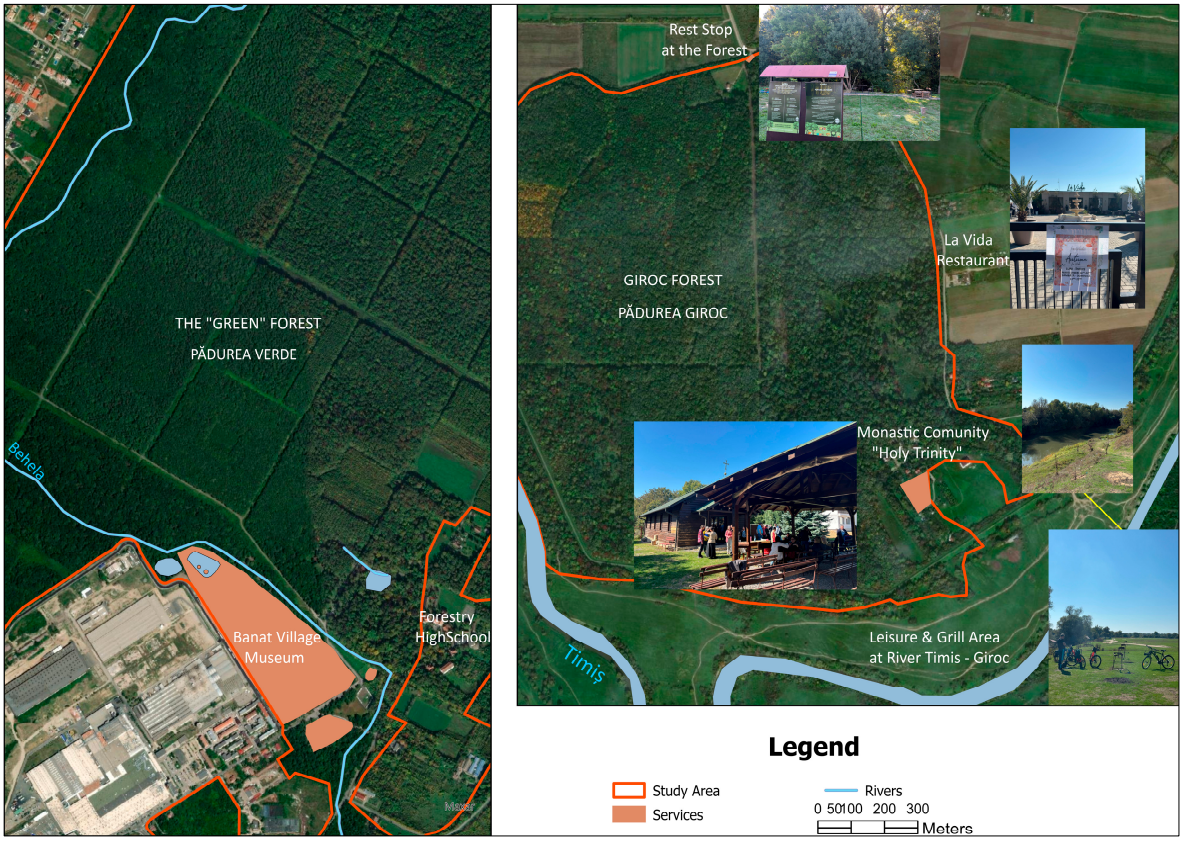


Figure 2. Spaces and services present in the two analyzed forests.

In comparison, the two forests are accessible by car and by bicycle; however, only the Giroc forest has a specially designed bicycle path. With regard to biodiversity, the Green Forest is more anthropized, exhibiting a grid-like organization and proximity to industrial units, which is reflected in a higher noise level. In contrast, the Giroc Forest offers a more pristine landscape, enhanced by the presence of the Timis riverbed. The Green Forest offers a greater variety of services, including an open-air village museum, a restaurant, a church, and numerous open-air festivals. This is less common in the Giroc Forest, where there is only one restaurant and a monastery. Nevertheless, a bicycle route traverses the forest, and a picnic area is available, albeit in a state of disrepair. Additionally, the Green Forest features a forestry high school, a former zoo (now closed), and a memorial. These amenities are absent in the Giroc Forest, but the Timis River serves as a compensatory attraction for fishermen, onlookers, and photographers (Table 2).

Table 2. Existing equipment and services in the studied forests.

		Study Areas	
Criteria		**Green Forest**	**Giroc Forest**
Accessibility	*Presence*	Yes	Yes
	Observation	Easy access (road, pedestrian). Lack of cycle paths to the forest	Easy access (especially for cyclists). Roads to Timis—unmaintained.
Landscape biodiversity	*Presence*	Yes	Yes
	Observation	Anthropized. Urban Landscape (grid)	Wild. Meadow landscape
Silence	*Presence*	Less	Yes
	Observation	The silence can be affected by the proximity of the city and the organization of festivals and concerts.	The silence is disturbed by private events organized on the Timis Meadow.

Table 2. *Cont.*

Criteria		Study Areas	
		Green Forest	**Giroc Forest**
Recreational services	*Presence*	Yes	Yes
	Observation	Banat Village Museum. Restaurant. Forest paths for biking/running/walking.	Restaurant. Footpaths for walking (dike). Recreation barbecue area of the Timis Meadow.
Recreational infrastructure	*Presence*	Yes	Yes
	Observation	Lack of bicycle paths. Drinking water sources or toilets can be found in the Village Museum.	Activities: fishing, swimming, barbecue (meals and barbecues), cycling.
Cultural services	*Presence*	Yes	No
	Observation	Banat Village Museum	-
Religious services	*Presence*	Yes	Yes
	Observation	Church of the Banat Village Museum	"Holy Trinity" monastic community
Tourist services	*Presence*	Yes	Less
	Observation	Festivals held in the Museum and inside the forest (Plai, Codru, Festival of Ethnic Groups)	Tourist trail—Eco Timis No. 3 "Timis Meadow—Macedonia Forest Reservation"
Outdoor events	*Presence*	Yes, irregular	Informal
	Observation	Organized—Festivals. Concerts	Walks. Recreation barbecue area on the Timis Meadow
Sports services	*Presence*	Yes	Yes
	Observation	On forest roads, people go jogging or cycling.	Timis Eco Bike Trail
Educational services	*Presence*	Yes	No
	Observation	Forestry High School	-
Commemorative spaces	*Presence*	Yes	No
	Observation	Anti-Communist Resistance Monument	-
Commercial services	*Presence*	Yes	Yes
	Observation	Shop—Village Museum. Events hall	Restaurant
Landscaped paths	*Presence*	No	From
	Observation	Walking is usually on forest roads	Bike path to the forest
Tourist/cycling trails	*Presence*	No	Yes
	Observation	-	Eco Trail Timis n.3
Water course	*Presence*	Yes	Yes
	Observation	Behela, a small river with temporary runoff.	Timis River. Important for activities related to fishing, swimming, relaxation, aesthetic value, etc.
Safety issues	*Presence*	Yes	Yes
	Observation	Pets.	Stray dogs. Jackals

Source: Authors' own field observations in the two selected forests.

5. Results

A synthetic approach was initially employed based on selected interview data, focusing on the frequency of visits and visitors' perceptions of the forests. Furthermore, the content analysis of the interviews yielded three primary themes: (1) the benefit of the ecosystem values of these forests, including the recreational, aesthetic, and cultural values; (2) visitors' disappointments with the management quality of the forest areas; and (3) the need for organized activities.

5.1. A Quantitative Overview of Interview Results

In regard to the individuals interviewed in the field, the frequency with which they typically visit the forest is approximately nine times per month. It should be noted, however, that three of the interviewees visit the forest on a daily basis due to the nature of their occupations (for example, they are a forester, a monk at the monastery, or a museum worker). If the three aforementioned cases are excluded, the average frequency of visits is approximately seven days per month. This elevated average can be attributed to the fact that a subset of individuals visits the forest on a daily basis, particularly those who reside in close proximity and utilize the area for walking their dogs or engaging in jogging. In contrast, over 50% of respondents visit the forest a maximum of one or two times per month, while a further 30% do so three or four times per month. No notable discrepancy was observed between male and female respondents with respect to the frequency of their forest visits.

In order to ascertain the level of satisfaction among visitors with regard to the manner in which the forests are managed and the accessibility of these natural resources, a scale was employed, ranging from 1 to 5, with 1 indicating a lack of satisfaction and 5 signifying a high degree of satisfaction. The mean score for respondents was 3.27, with no significant differences between male and female respondents. In terms of age, the over 60-year-old persons have a satisfaction level of 3.66 on a five-point scale, while the 40–60 s score was 3.09. The majority of respondents (20 out of 36) indicated appreciation for the peace and quiet, 14 respondents cited appreciation for the fresh air, and 10 respondents indicated appreciation for the trees. Furthermore, the most significant advantages of forests over urban parks are the tranquility (21 respondents) and the cleaner air (10 respondents).

The majority of respondents expressed dissatisfaction with the presence of garbage in the forests and the lack of trash bins (16 respondents), followed by those who were dissatisfied with the number of cars and ATVs entering the forest (10 respondents). With regard to the services and facilities that should be developed in these forests, the responses are multifaceted. Some respondents believe that improvements could be made in terms of organization, citing the need for additional litter bins, picnic areas, toilets, drinking water sources, and benches. Other respondents emphasized the importance of organizing more outdoor activities, particularly sports, recreation, and activities for children. With regard to festivals and concerts, opinions were divided, with four individuals expressing support for new festivals and concerts and two opposing such activities (Table 3).

Table 3. A synthetic approach to interview responses.

R:	Nb. of Days/Month in the Forest	Appreciated in the Forest	Amenities (1—Dissatisfied, 5—Satisfied)	Advantages of Urban Forests over Urban Neighborhood Parks	What Other Facilities/Services/Events Should Be Provided in the Forest	Proposed Rules or Restrictions
I1	8	Equipping the forest.	5	Fewer people; easier way of jogging.	Litter bins; areas with drinking water; running and cycling competitions; no festivals.	ATV and Motorcycle Prohibition.
I2	30	Fresh air. Quiet. Dogs walking area.	2	Storm protection; clean air.	Paths; a higher level of organization and planning; no festivals.	Restricting access by car.
I3	30	Fresh air; silence; dog walking area.	1	Fewer people.	Tourist and sports trails.	Restricting access by car.
I4	2	Fresh air; silence.	5	Fresh air; silence.	Spaces for outdoor activities; concerts.	Restrictions on pets (dogs).
I5	3	Beauty of trees.	5	Silence.	Spaces for outdoor activities; activities with past practices from different villages.	Fire ban.
I6	30	Fresh air; silence; normality; "The village museum at the end of town".	4	Outdoor exhibition (Village Museum).	Restaurant.	Afforestation work.
I7	1	The diversity of houses in the Village Museum.	2	Fresh air; informative and cultural role.	Museum tour guide; trash bins; picnic areas.	Restrictions on littering.

Table 3. *Cont.*

R:	Nb. of Days/Month in the Forest	Appreciated in the Forest	Amenities (1—Dissatisfied, 5—Satisfied)	Advantages of Urban Forests over Urban Neighborhood Parks	What Other Facilities/Services/Events Should Be Provided in the Forest	Proposed Rules or Restrictions
I8	1	Fresh air; feelings of cooling in summertime.	3	Fresh air.	Trails; a higher level of organization and planning.	Restrictions on littering.
I9	3	Fresh air; feeling of cooling in the summertime; silence.	3	Silence. The diversity of vegetation.	Toilets. Drinking water facilities. Cultural festivals.	Restrictions on littering. Fire ban.
I10	4	Fresh air; cooling in summertime; silence.	4	The wider space.	Toilets; activities for children.	Restrictions on littering.
I11	2	Beauty of trees; fresh air.	4	Vegetation diversity.	Police patrols; spaces for children; greening activities.	Restrictions on littering.
I12	1	Fresh air.	3	Silence.	Benches; chairs; sports activities.	Restrictions on littering.
I13	1	Silence.	3	The wider space; destination.	Camping spaces; tables; benches; litter bins; sports and children's activities.	Restricting access by car.
I14	5	Fresh air.	2	Fresh air.	Benches; chairs; picnic tables.	Restricting access by car.
I15	4	Trees; fresh air.	2	Silence.	Spaces for outdoor activities.	Deforestation restrictions.
I16	10	The religious aspect.	3	Silence.	Bike paths on the river dike.	Restrictions on noise pollution.
I17	5	The religious aspect.	3	Silence.	Transportation to the forest; hiking; picnic.	Stray dog restrictions.
I18	30	Beauty of trees; silence.	2	Silence; forest's depth.	Paths; litter bins; greening activities.	Restrictions on littering.
I19	4	Beauty of trees.	2	Silence; fewer people.	Spaces for children.	Restrictions on noise pollution.
I20	3	Silence.	2	Silence.	Trash bins; fishing competitions.	Restrictions on deforestation. Restrictions on water pollution.
I21	4	The cooling air; water; silence.	3	Peace; fresh air.	Spaces for children.	Fire ban.
I22	30	The silence; beauty of trees.	2	Peace; fresh air.	Paths; trash bins; musical activities.	Restricting access by car.
I23	30	Fishing; swimming in the river; bike lane.	3	Silence.	Litter bins; activities for children.	Restricting access by car.
I24	2	Silence; the beauty of trees.	4	Silence.	Camping sites; activities for children.	Restricting access by car. Prohibition of ATV, Motorcycle.
I25	4	Trees. Water.	4	Fresh air.	Toilets; waste bins; drinking water facilities; gastronomic and sporting activities.	Restricting access by car. Prohibition of ATV, Motorcycle.
I26	1	Silence; the beauty of trees.	3	Silence.	Litter bins; recreational activities.	Restrictions on littering.
I27	1	Silence; fresh air.	3	Peace. Fresh air.	Litter bins; recreational activities.	Restrictions on littering.
I28	2	Beauty of trees; silence.	5	The wider space.	Paths; bike lanes.	Hunting restrictions.
I29	4	Silence; relaxation.	5	The wider space.	Sport trails; paths.	Restrictions on littering.
I30	4	Silence; beauty of trees.	4	Silence.	Spaces with drinking water; camping.	Restrictions on littering.
I31	7	Silence.	3	Silence.	Litter bins; recreational activities.	Restrictions on littering.
I32	2	Silence.	4	Silence.	Barbecue areas; paths; greening; activities for children.	Restrictions on littering.
I33	2	Fresh air; beauty of trees.	5	Wild landscape.	Sport trails.	Restrictions on littering. Fire ban.
I34	30	Peace; relaxation.	3	Vegetation diversity.	Barbecue facilities; toilets; paths.	Restricting access by car.
I35	4	Silence.	3	Fewer people; silence	Benches; trash bins; festivals; concerts.	Restrictions on littering.
I36	6	Fresh air; bike lane.	4	Peace; fresh air.	Benches; trash bins; festivals.	Restrictions on littering.

5.2. The Benefit of the Ecosystem Values of These Forests, Including the Recreational, Aesthetic and Cultural Values

When asked about the broader benefits of the forests for humans, all interviewees presented the broader benefits of the forests and their related ecosystem services as follows.

> 'Ah, well, the forest is our 'green gold'. Well, we cannot live without forests—they offer air, health, peace, and protection'. (I5)

> 'Especially when you come from a city like this, out of a continuous crowd, running from one place to another, you enter the forest, it calms you down. You don't feel the passing of time so much'. (I9)

> 'So in the forest, my wife says about me, when you go into a forest, your face lights up and you change and I don't know, it's a favorable environment. What's important is that the forest is an ozone layer, it's a breath of oxygen produced by trees'. (I34)

Therefore, forests are seen as offering fresh air, helping the ozone layer, peace, and relaxation place. In addition to their role in providing fresh air and relaxation, urban and peri-urban forest ecosystems offer psychological well-being and facilitate social relations and practices. Furthermore, forests are presented as a secure environment conducive to the formation of memories for passers-by.

> 'This forest is safe in every way, physically, spiritually and psychologically'. (I16)

> 'The forest is an oasis of normality, of naturalness, of tranquility and a manager of memory'. (I6)

> 'We watch shooting stars in August when the Perseids are on. We get a bunch of our friends together, and we come out in the field, where there aren't so many lights, and we sit and talk. At the beginning of August, there's a lot of them, and it's really beautiful'. (I28)

The spiritual role of the forests is primarily manifested through the practice of pilgrimage to the two forests, which are home to churches of significant religious importance.

> 'I'm coming in this forest for the monastery here at Giroc and, as I said, to discover God more deeply'. (I16)

> 'Yes, absolutely, in the strictest sense of the word. It really is a forest spiritual community here. The fact that we have this meal afterward, the mass, the agape, the fact that people get to know each other, we talk to the priests, we talk to the monks'. (I17)

In terms of activities undertaken in the forest, respondents indicated that in addition to walking, they engage in other pursuits such as bicycling, fishing, swimming, and searching for wild animals.

> 'There's a bike path here. I've introduced it into my relaxation circuit quite often. I also use the bike path to the border'. (I30)

> 'Other than walking, and I have two places, two places where there are fallen trees, in the shade of which you can lie down and pray after prayer'. (I19)

> 'The water itself, you can go swimming, maybe fishing, bathing and the forest is beautiful and the forest inside is elegant. In the forest it's clean; inside you can walk'. (I23)

> 'Well, there are trails/bike lanes, some paths in the forest, several, from different trails, I know a few trails that are very well laid out for bicycles'. (I33)

> 'Yeah, it's definitely a much wilder landscape. You can still see animals for example, we saw deer several times, they were even running parallel to us when we were biking'. (I33)

In this regard, it is evident that visitors engage in a range of activities within urban and peri-urban forests, including walking, cycling, fishing, bathing, and swimming in the waterways that traverse these areas, as well as observing wildlife. It is noteworthy that respondents perceive urban and peri-urban forests to be less crowded and less populated than urban and peri-urban parks. The role of the forest is distinct and is perceived to be of greater value, as evidenced by the following responses.

> 'The air is not so polluted in this forest than in parks. In the city, even if it is a park, even if there are trees near roads, there is still heat and pollution. The air is cleaner here in the forest'. (I14)

> 'The advantages of forests are that there are no people, and you can go if you want peace and quiet. In the forest, you know that you will not bump into too many people; if you do, you can go there, and there will not be anyone there'. (I35)

> 'You come here to walk around, not to sit like in a park'. (I1)

In this manner, parks are regarded as locations where urban pollution is prevalent and are perceived as less tranquil than urban forests. Additionally, only a limited number of responses commend the parks, yet forests are still regarded as a superior means of preserving wilderness.

> 'For me, parks, especially in a city, are a bit of an oasis of greenery, but they are quiet by no means. The forest is that wild world'. (I24)

In conclusion, the perception of urban and peri-urban ecosystem services is informed by a multiplicity of perspectives. All visitors to forests cite health benefits, including access to clean and fresh air, as the primary motivation for their visit. Furthermore, a considerable number of visitors engage in spiritual activities, such as prayer, and physical pursuits, such as walking, cycling, and fishing. Nonetheless, urban and peri-urban parks are not regarded with the same level of esteem as urban and peri-urban forests. This is due to the fact that the forests are situated in the outskirts of Timișoara, where urban pollution is less perceptible, and they provide more extensive spaces for a greater variety of psychological and physical activities.

5.3. Visitors' Disappointment with the Management Quality of the Forest Areas

Although the majority of visitors expressed positive views regarding the two selected forests, several critiques were noted with regard to the urban and peri-urban management of these forests. Among the grievances are concerns regarding air pollution from the Continental Tire enterprise situated in close proximity to the Padurea Verde/Green Forest, noise pollution from festivals and ceremonies/weddings held at restaurants in the vicinity of the Giroc forest, the presence of fallen trees on forest trails, a perceived lack of management regarding stray dogs or coyotes, waste discarded at the edge of the forest, and the presence of plastic waste in the River Timis. Furthermore, the absence of police personnel in the forests impedes the capacity of the relevant authorities to address instances of littering or other forms of misconduct by visitors.

In the post-communist era, local authorities in Timișoara have pursued the attraction of neoliberal and transnational companies in order to generate additional revenue for the cities and provide employment opportunities for the local population. However, a considerable number of these enterprises have resulted in the pollution of the surrounding area. One such company is the Continental Tire Enterprise, which produces automobile tires and is situated precisely at the periphery of the Padurea Verde. The respondents expressed discontentment at the evident air pollution in the forest and the persisting odor from the Continental Tire Enterprise.

> 'But sometimes it smells bad, I think it's coming from the Continental tires factory'. (I1)

> 'The only thing is that if you come on foot, as we did, this part of the Continental, this area is not very pedestrian accessible due to Continental's built area. . .it is also a polluted area'. (I7)

'Yeah, this forest (Padurea Verde) is polluted because certain factories are nearby that process certain raw materials'. (I6)

Conversely, some visitors to the Giroc forest expressed discontent with the parties and festivals that are held primarily on weekends at the restaurants situated in close proximity to the forest.

'I didn't agree with the festivals in forest areas because just as the animals disturb us when they come into our environment, we disturbed them quite a bit with the music, at least at nights it is much louder music and deafening noises for the animals'. (I2)

'It's not always quiet in the area, as Timis is very close, there are monster parties, only parties, parties'. (I18)

'Noise pollution is a problem in this forest. I think noise pollution is worse than pollution in general'. (I25).

In addition to the issue of noise pollution, visitors also expressed discontent with the lack of management of the two forests. One of the most significant concerns is the presence of fallen trees along the forest trails.

'Unfortunately, many downed trees, dry on the ground, are not being cleaned up. But there's much dry wood on the ground which at least could be given to the poor people of Giroc village as heating wood or some old trees could be chopped, but that's it, the forest not well maintained, I mean you can see it all around the forest'. (I18)

'We need cleared paths to walk on; there are no fallen trees in the forest but not to see trees fallen on paths'. (I22).

Another issue of disappointment is the pollution of the River Timis, which traverses the Giroc forest, as one interviewee stated:

'Unfortunately, this forest is not very clean. I mean, in general, there's quite a lot of rubbish on the River Timis crossing this forest'. (I21)

Additionally, respondents expressed discontentment with the absence of public toilets and designated locations for drinking water. This sentiment was articulated by I19:

'I would like there to be some distance away, perhaps a public toilet and a way to be able to have water.' (I9)

A number of respondents proposed the idea of remunerating police officers with funds provided by local authorities in return for their vigilance in monitoring and enforcing behavioral standards. This suggestion was put forth by interviewees 11 and 36:

'I'd like to see police patrols, I'd like to see them on bike, I'd like to see the authorities to do more animations for the citizens out there and let's know we're safe'. (I11)

'Here it is not much police. . .. And a lot of times a lot of people come in there and get stoned by bad persons. And I've seen a lot of people like that, especially at night'. (I36)

Other respondents were of the opinion that visitors arriving by car were having a detrimental impact on the forest area. They proposed the introduction of a barrier to prevent cars from entering the forest and suggested that those who wished to enter by car should be required to pay a fee:

'I would put a barrier here at the embankment, 5 lei per car is not a big amount'. (I14)

One of the key issues in the Giroc forest area is the presence of free-roaming stray dogs. Such animals may present a danger to children and individuals in the vicinity.

'Nothing is being done against the dogs and there are many of them and at night you can hear them'. (I18)

'The coyotes or what are those at night when we go to see the stars, the jackals, I don't know what they are, you can hear them, you don't know exactly how close you are to them'. (I28)

Despite the occurrence of several fatalities, the relevant authorities have not yet taken sufficient measures to ensure the safety of individuals bathing in the River Timis. Furthermore, construction waste has been illegally deposited at the periphery of the Giroc forest, with no apparent consequence.

'About two or three places where you can take a bath is a place where it's very deep where I don't really recommend it as people drowned here a month ago, a little girl and her father'. (I23)

'That edge of the forest toward Dumbrăvița village was a quiet area, but there some people have thrown construction waste'. (I33)

Additionally, the presence of illogical barriers may present a challenge for some visitors utilizing bicycles in forest settings.

'Only that there, right at the entrance to the path, there is a barrier. I do not know if we should not enter there, but I don't know what its purpose is. I don't know if that could be removed from there'. (I36)

The reason for this absence of management is that the Giroc forest is situated within the boundaries of Timișoara, rather than within the administrative limits of Giroc village.

'Recently, this forest has been returned to Timișoara City Hall, but authorities are not too interested in the management of the forest'. (I34)

In conclusion, the respondents expressed discontent with a number of significant issues pertaining to the poor management of the forests. The strongest critiques presented by interviewees in their narratives pertain to the presence of waste and fallen trees on forest paths, noise, and odor from nearby restaurants and enterprises, free-roaming stray dogs and coyotes, and the lack of public toilets. It is incumbent upon the local authorities to take these issues into account, as there are many residents of urban and peri-urban Timișoara who could benefit from greater access to the forests and who will continue to have negative perceptions of the forests.

5.4. The Need for Organized Activities in the Forests and Maintaining Forests as Wild

In addition to the implementation of improved forest management practices, respondents have put forth suggestions for the organization of structured activities within the forest setting. The majority of visitors arrive with their children and grandchildren, while some are elderly. They have expressed a desire for activities in the forests that are tailored to the specific needs of young, adult, and elderly visitors. The majority of respondents expressed opposition to the implementation of festivals in the two forests. However, they did propose the introduction of activities such as running, cycling, reading, picnicking, and the organization of further craft fairs.

'Just activities like running competitions, cycling competitions, that's all, not festivals in forests'. (I1)

'But I was thinking about, I don't know, lighter things, like. . .coming to read in the forest yeah, let's come and put your hammock somewhere, let's do some of that lighter stuff. A picnic like Picnic on the river Bega'. (I7)

'Well, activities of running, walking, jogging for younger and elderly people'. (I8)

'In fact, after all, just as, for example, here in the Village Museum it is customary to have a folk craftsmen's fair, so it can be done in the forests of Romania'. (I9)

The interviewees also proposed the creation of recreational facilities for children, including trips and mini-soccer games, as well as the designation of local camping areas and the construction of additional trails for children.

'I'm thinking of some workshops but not requiring a lot of materials so that you make a mess or camps, I don't know, trips for children with trails like this, but that's about it, not concerts where too many people come'. (I10)

'You could very well do some of these scouting trails for kids, for reconnaissance. There could even be some activities here, why not set up a volleyball field, mini soccer, a bicycle track, but something not necessarily with motor sports to make noise, to disturb very loudly'. (I13)

'One could organize for example picnics like they organize now in Otelec village'. (I14)

Others proposed a more dialogue with monasteries and churches, so that church-related activities or pilgrimages to be done:

'Yes, maybe a direct dialog with the monastery of Șag wouldn't be a bad thing. I mean a route that could be taken at any time, maybe even a pilgrimage there and back I think it would be very beneficial'. (I16)

Examples go even to doing cleaning waste in the forests:

'I think, for example, cleaning activities. At one time we also did with young people, children, we used to go to the side of the road and clean, clean up the rubbish'. (I18)

Guitar singing could be also done in the entrance of the forests:

'In that place at the entrance to the forest to organize evenings of guitar singing. There and here they could make like a stage to be a stage setting, to be a bonfire'. (I22)

As eco-friendly toilets are currently unavailable, some respondents proposed the implementation of such facilities. Additionally, the forest furniture (benches and shades) and the organization of different cooking or fishing contests could be implemented, as one interviewee stated:

'Let there be some eco-friendly toilets, let there be a fountain as my friend says, change and find a viable solution to replace the grills, and the shade and benches. Entrance fee to the pier 10 lei per person or 5 lei per person to provide the necessary money. If we take the example of the Serbs, cooking contest, pot cooking, fishing contest, how to, say the cyclist'. (I25)

Another respondent considered that free rewards like fresh water could be given to passers-by in the forests:

'To know that when moving toward a point, to know that I find something there, at the end of the trail, as a form of reward for having traveled a distance and at least an opportunity to drink a cold water is waiting for me there'. (I30)

Finally, several respondents preferred the forests to remain as wild as possible. For instance, one respondent stated the following:

'I'd like to keep it a landscape that's close to the city, but still somewhat wild. You could organize all kinds of bike races or especially or running or something like that, or sporting events. Apart from that I wouldn't organize for example concerts in the middle of, in the middle of the forest or all that kind of stuff that would lead to degradation of the landscape'. (I33)

In conclusion, the respondents expressed disparate opinions regarding the measures that could be employed to enhance the appeal of the forests to visitors. Firstly, activities tailored to specific age groups (children, adults, and the elderly) could be implemented by the relevant authorities. Additionally, respondents have proposed a variety of more passive

activities, including reading, singing, and offering travelers in the forest a cold drink. In conclusion, the maintenance of the forests' wilderness is of paramount importance to some of the interviewees.

6. Discussions

The present study makes a contribution to the theoretical understanding of ecosystem services by providing new insights into the recreational, aesthetic, and spiritual values of urban and peri-urban forests. Forests are perceived to provide a range of ecosystem services, including the provision of fresh air, support for the ozone layer, and the creation of a tranquil and relaxing environment. These findings align with those of previous studies [2,4,5,20]. Furthermore, our findings indicate that psychological well-being and the formation of social relations and practices may be facilitated in forest environments. This contributes to the existing literature on the subject, which has previously highlighted that visitors are satisfied with visiting forests and that they experience psychological well-being as a result [1]. The contribution of this study is that the responses were obtained from visitors who had actually visited the forests in question, rather than from those who had merely viewed them online. Furthermore, the spiritual value of forests is evident, particularly given the potential for the presence of churches or monasteries within their boundaries.

The majority of visitors indicated that their preferred activities in forest spaces were walking, jogging, biking, fishing, swimming, and searching for wild animals. The majority of visitors to forests do so for health-related reasons, namely, to enjoy the benefits of clean and fresh air, as well as to engage in physical activities. These aspects of the recreational and cultural values of urban and peri-urban forests have been presented in previous studies [2–5], but those studies highlighted only one dimension of the ecosystem services, either the urban forests ecosystem services or the peri-urban ecosystem services. In contrast, our study provides a more comprehensive overview of the two types of spaces (i.e., urban and peri-urban). Furthermore, it was observed that urban and peri-urban forests are perceived more favorably by visitors than urban and peri-urban parks. This may be attributed to the fact that parks are often subject to higher levels of pollution and have more limited space for physical activities, particularly in urban or peri-urban areas.

In comparison to recent urban green space provision of cultural ecosystem services (CES) based on different landscape features and land use contexts in Finland's capital city Helsinki (see [14]), visitor perceptions of ecosystem services in the forests of Timișoara and its surrounding area also highlight the importance of physical health improvement through longer physical activities. Furthermore, our findings on the efficacy of maintaining large urban forests in promoting ecosystem services are consistent with those observed in the Helsinki area. Furthermore, respondents in our study forests emphasize the significance of atmospheric air quality for their wellbeing. This finding aligns with those reported in pine and beech forests in urban areas of Poland [12] and other countries.

Furthermore, it is noteworthy that a greater preference for urban forests over urban parks was expressed by our respondents. Consequently, our findings diverge from those of Jang-Hwan et al. [16], who posit that Seoul citizens perceive natural parks and urban neighborhood parks to be analogous.

Furthermore, our research contributes to the existing body of knowledge in Europe on generational differences in perception. As highlighted by Hegetschweiler et al. [15], there is a comparative analysis between teenagers and adults in terms of the usage and perception of ecosystem services in Swiss forests. This includes an examination of the diverse motives for forest visits and forest activities, as well as the constraints that influence visitation patterns. Our findings additionally indicate that younger individuals tend to favor more active forms of forest utilization, whereas adults and the elderly typically engage with forests in a more contemplative manner and express a preference for activities that facilitate a slower pace of movement. Consequently, the management of recreational urban and peri-urban forests should prioritize the differentiation of needs across generations, taking into account the varying preferences and expectations of each age group.

In this study, we did not undertake a historical overview of ecosystem services in urban and peri-urban forests as presented by Berglihn and Gomez-Baggethun [13] for the surrounding forests of Oslo. However, we identified that cultural factors play a pivotal role in influencing the current ecosystem services. It can be stated that water and tourism are of particular importance to the local Timișoara population, as evidenced also by the case of Oslomark. However, it is evident that improvements are required in the areas of habitat and provisioning services to ensure that visitors are not disappointed by waste and other aspects in the urban and peri-urban forests.

In terms of disservices that such forests have for visitors, there are elements including human authorities' lack of actions, such as fallen woods on the forest paths and the presence of free-roaming stray dogs and too many insects irritating visitors, lack of police officers or guardians, lack of river management crossing the forests, as well as illegal garbage placed in forest and noise and smell pollution coming from nearby restaurants and enterprises. Therefore, we responded to our first research question (What are the benefits of the recreational, aesthetic, and spiritual values offered by the urban and peri-urban forests and what are the negative perceptions around the current management of urban and peri-urban forests?). Although forests in urban and peri-urban have a plethora of benefits to humans, humans also have to be more attentive to the forests to not be polluted and damaged, so better management of forests is needed at the local level.

The second research question, which concerns the ways in which urban and peri-urban forests might be preserved in the future and the solutions proposed by visitors to enhance sustainable urban and peri-urban ecosystem services, has more practical implications. A number of intriguing activities were proposed by visitors, designed to cater to the interests of children, adults, and the elderly. These included a mini-soccer competition, a collective reading of books, a guitar-playing competition, and the provision of cold drinks to travelers in the forests. In addition to addressing the issue of pollution from restaurants and businesses, respondents emphasized the importance of preserving the natural environment of the forests.

7. Conclusions

The objective of this study was to examine the recreational and cultural values that forests provide as ecosystem services in urban and peri-urban areas of Timișoara. The implications of our study have both theoretical and practical value. From a theoretical perspective, our study contributes to the existing literature on the recreational value of forests by providing unique insights into the subject matter from the perspective of East-Central European contexts. Furthermore, visitors offer constructive criticism regarding the services provided by the forests, as well as the lack of implications from the authorities. In practical terms, our study could prove useful to urban authorities in Timișoara, offering guidance for the improved management of other cities and peri-urban forest spaces.

In addition to demonstrating the contribution of forests to the provision of fresh air and relaxation, the advantages of urban and peri-urban forest ecosystems encompass psychological well-being and the fostering of shared social relations and practices. In exchange, there are concerns about air pollution from the Tire Enterprise, situated in close proximity to the Padurea Verde/Green Forest, noise pollution from festivals and ceremonies/weddings held at restaurants near the Giroc forest, the presence of fallen trees on forest trails, a lack of management strategies for stray dogs or coyotes, waste disposal at the forest's periphery, and the presence of plastic waste in the Timis River. Additionally, there is a perceived lack of police presence in the forests, which hinders the ability of authorities to respond to instances of littering or other forms of misconduct by visitors.

The concept of urban and peri-urban ecosystem services is open to a variety of interpretations. All visitors come to forests for a variety of reasons, including seeking health benefits (by enjoying the fresh and clean air), psychological and spiritual well-being (through prayer), and physical activities (such as walking, cycling, and fishing). Nevertheless, urban and peri-urban parks are not as highly regarded as urban and peri-urban forests. This

is due to the fact that the forests are situated on the outskirts of Timișoara, where urban pollution is less perceptible, and the forests provide greater opportunities for psychological and physical activities.

From these results, a few policy recommendations can be derived. Firstly, the configuration of these two forests indicates a necessity for the provision of more appropriate equipment, particularly in the form of primary and non-invasive infrastructure, such as designated areas with seating or drinking water facilities. While the majority of respondents indicated that the forest's primary appeal is its tranquility and naturalness, this does not preclude the creation of designated picnic areas that do not disrupt the forest's overall ambiance. It is important to note that these areas require constant maintenance and cleaning. The example of the Giroc Forest, where such an area has been degraded, serves to illustrate this point. The creation of these picnic areas would represent a significant addition to the limited range of services currently available in the city and its surrounding area. Furthermore, there is an opportunity for enhanced collaboration between local government and non-governmental organizations (NGOs) in identifying needs and implementing solutions. The play and rest area at Giroc Forest, which was developed through this collaborative approach, serves as an illustrative example. With regard to cultural activities, there is a need to diversify offerings to appeal to a broader age range and to promote them more widely.

Further research could be done in other urban and peri-urban forests of Central and Eastern Europe and worldwide in order to see if our results are similar or different to the situation in other countries and regions. There is also a need for further research on the impact of festivals on forests, as well as on the relationship that industrial production units develop with the forest ecosystem.

The present study is not without limitations, which are outlined below. Firstly, it would be beneficial to conduct further interviews and questionnaires with visitors in urban and peri-urban areas, in order to gain a more comprehensive understanding of visitors' opinions regarding their experiences in forests. Secondly, the decision was taken to focus on a single forest within the city and another within its peri-urban area. Further research could adopt a comparative approach, examining the experiences of visitors to urban and peri-urban forests in multiple cities. This would facilitate the identification of differences in visitor experiences between urban and peri-urban settings.

Author Contributions: Conceptualization, R.C.; methodology, R.C. and A.D.; software, D.C.; validation, R.C.; formal analysis, A.D. and D.C.; investigation, D.C. and A.D.; resources, A.D.; data curation, D.C.; writing—original draft preparation, R.C., D.C. and A.D.; writing—review and editing, D.C., R.C. and A.D.; visualization, D.C.; supervision, R.C.; project administration, R.C.; funding acquisition, A.D. All authors have read and agreed to the published version of the manuscript and contributed equally to this work.

Funding: This work was financially supported by a grant from the Romanian Ministry of Education and Research: CNCS/CCCDI-UEFISCDI, project number PN-III-P1-1.1-PD-2019-0274, PD 213/2020.

Data Availability Statement: The data presented in this study are available upon request from the corresponding author. The data are not publicly available due to the privacy of respondents.

Acknowledgments: The authors thank the anonymous respondents for their full consent and contributions to this study.

Conflicts of Interest: The authors declare no conflicts of interest.

References

1. Chen, X.; Wang, Y.; Huang, T.; Lin, Z. Research on Digital Experience and Satisfaction Preference of Plant Community Design in Urban Green Space. *Land* **2022**, *11*, 1411. [CrossRef]
2. Russo, A.; Cirella, G. Urban ecosystem services: Advancements in urban green development. *Land* **2023**, *12*, 522. [CrossRef]
3. Richards, D.R.; Thompson, B.S. Urban Ecosystems: A New Frontier for Payments for Ecosystem Services. *People Nat.* **2019**, *1*, 249–261. [CrossRef]
4. Haase, D.; Frantzeskaki, N.; Elmqvist, T. Ecosystem services in urban landscapes: Practical applications and governance implications. *Ambio* **2014**, *43*, 407–412. [CrossRef] [PubMed]

5. Bolund, P.; Hunhammar, S. Ecosystem services in urban areas. *Ecol. Econ.* **1999**, *29*, 293–301. [CrossRef]
6. Pan, H.; Page, J.; Cong, C.; Barthel, S.; Kalantari, Z. How Ecosystems Services Drive Urban Growth: Integrating Nature-Based Solutions. *Anthropocene* **2021**, *35*, 100297. [CrossRef]
7. Russo, A.; Escobedo, F.J.; Cirella, G.T.; Zerbe, S. Edible Green Infrastructure: An Approach and Review of Provisioning Ecosystem Services and Disservices in Urban Environments. *Agric. Ecosyst. Environ.* **2017**, *242*, 53–66. [CrossRef]
8. Diener, A.; Mudu, P. How Can Vegetation Protect Us from Air Pollution? A Critical Review on Green Spaces' Mitigation Abilities for Air-Borne Particles from a Public Health Perspective—With Implications for Urban Planning. *Sci. Total Environ.* **2021**, *796*, 148605. [CrossRef]
9. Wang, C.; Ren, Z.; Dong, Y.; Zhang, P.; Guo, Y.; Wang, W.; Bao, G. Efficient Cooling of Cities at Global Scale Using Urban Green Space to Mitigate Urban Heat Island Effects in Different Climatic Regions. *Urban For. Urban Green.* **2022**, *74*, 127635. [CrossRef]
10. Kruize, H.; van der Vliet, N.; Staatsen, B.; Bell, R.; Chiabai, A.; Muiños, G.; Higgins, S.; Quiroga, S.; Martinez-Juarez, P.; Aberg Yngwe, M.; et al. Urban Green Space: Creating a Triple Win for Environmental Sustainability, Health, and Health Equity through Behavior Change. *Int. J. Environ. Res. Public Health* **2019**, *16*, 4403. [CrossRef]
11. Langemeyer, J.; Wedgwood, D.; McPhearson, T.; Baró, F.; Madsen, A.L.; Barton, D.N. Creating Urban Green Infrastructure Where It Is Needed—A Spatial Ecosystem Service-Based Decision Analysis of Green Roofs in Barcelona. *Sci. Total Environ.* **2020**, *707*, 135487. [CrossRef] [PubMed]
12. Dudek, T.; Marć, M.; Zabiegała, B. Chemical Composition of Atmospheric Air in Nemoral Scots Pine Forests and Submountainous Beech Forests: The Potential Region for the Introduction of Forest Therapy. *Int. J. Environ. Res. Public Health* **2022**, *19*, 15838. [CrossRef] [PubMed]
13. Berglihn, E.C.; Gomez-Baggethun, E. Ecosystem services from urban forests: The case of Oslomarka, Norway. *Ecosyst. Serv.* **2021**, *51*, 101358. [CrossRef]
14. Wang, Y.; Niemelä, J.; Kotze, D.J. The delivery of Cultural Ecosystem Services in urban forests of different landscape features and land use contexts. *People Nat.* **2022**, *4*, 1369–1386. [CrossRef]
15. Hegetschweiler, K.T.; Wartmann, F.M.; Dubernet, I.; Fischer, C.; Hunziker, M. Urban forest usage and perception of ecosystem services—A comparison between teenagers and adults. *Urban For. Urban Green.* **2022**, *74*, 127624. [CrossRef]
16. Jang-Hwan, J.; So-Hee, P.; JaChoon, K.; Taewoo, R.; Lim, E.M.; Yeo-Chang, Y. Preferences for ecosystem services provided by urban forests in South Korea. *For. Sci. Technol.* **2020**, *16*, 86–103. [CrossRef]
17. Lapointe, M.; Gurney, G.G.; Coulthard, S.; Cumming, G.S. Ecosystem Services, Well-being Benefits and Urbanization Associations in a Small Island Developing State. *People Nat.* **2021**, *3*, 391–404. [CrossRef]
18. Tan, P.Y.; Zhang, J.; Masoudi, M.; Alemu, J.B.; Edwards, P.J.; Grêt-Regamey, A.; Richards, D.R.; Saunders, J.; Song, X.P.; Wong, L.W. A Conceptual Framework to Untangle the Concept of Urban Ecosystem Services. *Landsc. Urban Plan.* **2020**, *200*, 103837. [CrossRef]
19. Russo, A.; Cirella, G.T. Urban Ecosystem Services: New Findings for Landscape Architects, Urban Planners, and Policymakers. *Land* **2021**, *10*, 88. [CrossRef]
20. Rozas-Vasquez, D.; Spyra, M.; Jorquera, F.; Molina, S.; Calo, N.C. Ecosystem services supply from peri-urban landscapes and their contribution to the Sustainable Development Goals: A global perspective. *Land* **2022**, *11*, 2006. [CrossRef]
21. Mallinis, G.; Koutsias, N.; Arianoutsou, M. Monitoring land use/land cover transformations from 1945 to 2007 in two peri-urban mountainous areas of Athens metropolitan area, Greece. *Sci. Total Environ.* **2014**, *490*, 262–278. [CrossRef] [PubMed]
22. Spyra, M.; Kleemann, J.; Calò, N.C.; Schürmann, A.; Fürst, C. Protection of peri-urban open spaces at the level of regional policy-making: Examples from six European regions. *Land Use Policy* **2021**, *107*, 105480. [CrossRef]
23. Spyra, M.; La Rosa, D.; Zasada, I.; Sylla, M.; Shkaruba, A. Governance of ecosystem services trade-offs in peri-urban landscapes. *Land Use Policy* **2020**, *95*, 104617. [CrossRef]
24. Cattivelli, V. Planning peri-urban areas at regional level: The experience of Lombardy and Emilia-Romagna (Italy). *Land Use Policy* **2021**, *103*, 105282. [CrossRef]
25. La Rosa, D.; Geneletti, D.; Spyra, M.; Albert, C. Special issue on sustainable planning approaches for urban peripheries. *Landsc. Urban Plan.* **2017**, *165*, 172–176. [CrossRef]
26. Geneletti, D.; La Rosa, D.; Spyra, M.; Cortinovis, C. A review of approaches and challenges for sustainable planning in urban peripheries. *Landsc. Urban Plan.* **2017**, *165*, 231–243. [CrossRef]
27. Lee, Y.-C.; Ahern, J.; Yeh, C.T. Ecosystem services in peri-urban landscapes: The effects of agricultural landscape change on ecosystem services in Taiwan's western coastal plain. *Landsc. Urban Plan.* **2015**, *139*, 137–148. [CrossRef]
28. Hedblom, M.; Andersson, E.; Borgström, S. Flexible land-use and undefined governance: From threats to potentials in peri-urban landscape planning. *Land Use Policy* **2017**, *63*, 523–527. [CrossRef]
29. Voiculescu, M. Snow avalanche hazards in the Fagaras massif (southern Carpathians): Romanian Carpathians—Management and Perspectives. *Nat. Hazards* **2009**, *51*, 459–475. [CrossRef]
30. Voiculescu, M.; Onaca, A. Spatio-temporal reconstruction of snow avalanche activity using dendrogeomorphological approach in Bucegi Mountains Romanian Carpathians. *Cold Reg. Sci. Technol.* **2014**, *104*, 63–75. [CrossRef]
31. Jula, M.; Voiculescu, M. Assessment of the Annual Erosion Rate along Three Hiking Trails in the Făgăraș Mountains, Romanian Carpathians, Using Dendrogeomorphological Approaches of Exposed Roots. *Forests* **2022**, *13*, 1993. [CrossRef]

32. Hossu, C.A.; Iojă, I.C.; Onose, D.A.; Niță, M.R.; Popa, A.M.; Talabă, O.; Inostroza, L. Ecosystem services appreciation of urban lakes in Romania. Synergies and trade-offs between multiple users. *Ecosyst. Serv.* **2019**, *37*, 100937. [CrossRef]
33. Mitincu, C.G.; Niță, M.R.; Hossu, C.A.; Iojă, I.C.; Nita, A. Stakeholders' involvement in the planning of nature-based solutions: A network analysis approach. *Environ. Sci. Policy* **2023**, *14*, 69–79. [CrossRef]
34. Comberti, C.; Thornton, T.F.; Wylliede Echeverria, V.; Patterson, T. Ecosystem Services or Services to Ecosystems? Valuing Cultivation and Reciprocal Relationships between Humans and Ecosystems. *Glob. Environ. Change* **2015**, *34*, 247–262. [CrossRef]
35. Luck, G.W.; Chan, K.M.; Eser, U.; Gómez-Baggethun, É.; Matzdorf, B.; Norton, B.; Potschin, M. Ethical Considerations in On-Ground Applications of the Ecosystem Services Concept. *BioScience* **2012**, *62*, 1020–1029.
36. Raymond, C.M.; Singh, G.G.; Benessaiah, K.; Bernhardt, J.R.; Levine, J.; Nelson, H.; Turner, N.J.; Norton, B.; Tam, J.; Chan, K.M.A. Ecosystem Services and Beyond: Using Multiple Metaphors to Understand Human–Environment Relationships. *BioScience* **2013**, *63*, 536–546. [CrossRef]
37. Taylor, L.; Hochuli, D.F. Defining greenspace: Multiple uses across multiple disciplines. *Landsc. Urban Plan.* **2017**, *158*, 25–38. [CrossRef]
38. Adegun, O.B.; Ikudayisi, A.E.; Morakinyo, T.E.; Olusoga, O.O. Urban green infrastructure in Nigeria: A review. *Sci. Afr.* **2021**, *14*, e01044. [CrossRef]
39. Oncini, F.; Hirth, S.; Mylan, J.; Robinson, C.H.; Johnson, D. Where the wild things are: How urban foraging and food forests can contribute to sustainable cities in the Global North. *Urban For. Urban Green.* **2024**, *93*, 128216. [CrossRef]
40. Tomprou, M.O. Opportunities and Challenges for the Creation and Governance of Productive Landscapes in Urban Transformations: The Case of Klosterøya Urban Fruit Forest Park. *Sustainability* **2023**, *15*, 2864. [CrossRef]
41. Alpaidze, L.; Salukvadze, J. Green in the City: Estimating the Ecosystem Services Provided by Urban and Peri-Urban Forests of Tbilisi Municipality, Georgia. *Forests* **2023**, *14*, 121. [CrossRef]
42. Sanesi, G.; Gallis, C.; Kasperidus, H.D. Urban Forests and Their Ecosystem Services in Relation to Human Health. In *Forests, Trees and Human Health*; Springer: Dordrecht, The Netherlands, 2021; pp. 23–40. [CrossRef]
43. Kondo, M.; Fluehr, J.; McKeon, T.; Branas, C. Urban Green Space and Its Impact on Human Health. *Int. J. Environ. Res. Public Health* **2018**, *15*, 445. [CrossRef] [PubMed]
44. Jim, C.Y.; Chen, W.Y. Ecosystem services and valuation of urban forests in China. *Cities* **2009**, *26*, 187–194. [CrossRef]
45. Kotze, D.J.; Lowe, E.C.; MacIvor, J.S.; Ossola, A.; Norton, B.A.; Hochuli, D.F.; Mata, L.; Moretti, M.; Gagné, S.A.; Handa, I.T.; et al. Urban forest invertebrates: How they shape and respond to the urban environment. *Urban Ecosyst.* **2022**, *25*, 1589–1609. [CrossRef]
46. Schägner, J.P.; Maes, J.; Brander, L.; Paracchini, M.-L.; Hartje, V.; Dubois, G. Monitoring recreation across European nature areas: A geo-database of visitor counts, a review of literature and a call for a visitor counting reporting standard. *J. Outdoor Recreat. Tour.* **2017**, *18*, 44–55. [CrossRef]
47. Sumanapala, D.; Wolf, I.D. Recreational Ecology: A Review of Research and Gap Analysis. *Environments* **2019**, *6*, 81. [CrossRef]
48. Veerkamp, C.J.; Schipper, A.M.; Hedlund, K.; Lazarova, T.; Nordin, A.; Hanson, H.I. A review of studies assessing ecosystem services provided by urban green and blue infrastructure. *Ecosyst. Serv.* **2021**, *52*, 101367. [CrossRef]
49. Krajter Ostoić, S.; Salbitano, F.; Borelli, S.; Verlič, A. Urban forest research in the Mediterranean: A systematic review. *Urban For. Urban Green.* **2018**, *31*, 185–196. [CrossRef]
50. Cilliers, S.; Cilliers, J.; Lubbe, R.; Siebert, S. Ecosystem services of urban green spaces in African countries-perspectives and challenges. *Urban Ecosyst.* **2013**, *16*, 681–702. [CrossRef]
51. Lamhamedi, H.; Lizin, S.; Witters, N.; Malina, R.; Baguare, A. The recreational value of a peri-urban forest in Morocco. *Urban For. Urban Green.* **2021**, *65*, 127339. [CrossRef]
52. Winter, P.L.; Selin, S.; Cerveny, L.; Bricker, K. Outdoor Recreation, Nature-Based Tourism, and Sustainability. *Sustainability* **2019**, *12*, 81. [CrossRef]
53. Gerrish, E.; Watkins, S.L. The relationship between urban forests and income: A meta-analysis. *Landsc. Urban Plan.* **2018**, *170*, 293–308. [CrossRef] [PubMed]
54. Livesley, S.; Escobedo, F.; Morgenroth, J. The Biodiversity of Urban and Peri-Urban Forests and the Diverse Ecosystem Services They Provide as Socio-Ecological Systems. *Forests* **2016**, *7*, 291. [CrossRef]
55. Wajchman-Świtalska, S.; Zajadacz, A.; Woźniak, M.; Jaszczak, R.; Beker, C. Recreational Evaluation of Forests in Urban Environments: Methodological and Practical Aspects. *Sustainability* **2022**, *14*, 15177. [CrossRef]
56. Fischer, A.P. Forest landscapes as social-ecological systems and implications for management. *Landsc. Urban Plan.* **2018**, *177*, 138–147. [CrossRef]
57. Schneider, C.; Achilles, B.; Merbitz, H. Urbanity and Urbanization: An Interdisciplinary Review Combining Cultural and Physical Approaches. *Land* **2014**, *3*, 105–130. [CrossRef]
58. Prebble, S.; McLean, J.; Houston, D. Smart urban forests: An overview of more-than-human and more-than-real urban forest management in Australian cities. *Digit. Geogr. Soc.* **2021**, *2*, 100013. [CrossRef]
59. Barron, S.; Sheppard, S.; Condon, P. Urban Forest Indicators for Planning and Designing Future Forests. *Forests* **2016**, *7*, 208. [CrossRef]
60. Lin, J.; Kroll, C.N.; Nowak, D.J.; Greenfield, E.J. A review of urban forest modeling: Implications for management and future research. *Urban For. Urban Green.* **2019**, *43*, 126366. [CrossRef]

61. Tirri, C.; Swanson, H.; Meenar, M. Finding the "Heart" in the Green: Conducting a Bibliometric Analysis to Emphasize the Need for Connecting Emotions with Biophilic Urban Planning. *Int. J. Environ. Res. Public Health* **2021**, *18*, 9435. [CrossRef]
62. Muñoz-Pacheco, C.B.; Villaseñor, N.R. Urban Ecosystem Services in South America: A Systematic Review. *Sustainability* **2022**, *14*, 10751. [CrossRef]
63. O'Brien, L.; De Vreese, R.; Kern, M.; Sievänen, T.; Stojanova, B.; Atmiș, E. Cultural ecosystem benefits of urban and peri-urban green infrastructure across different European countries. *Urban For. Urban Green.* **2017**, *24*, 236–248. [CrossRef]
64. Sevianu, E.; Maloș, C.V.; Arghiuș, V.; Brișan, N.; Bădărău, A.S.; Moga, M.C.; Muntean, L.; Răulea, A.; Hartel, T. Mainstreaming Ecosystem Services and Biodiversity in Peri-Urban Forest Park Creation: Experience From Eastern Europe. *Front. Environ. Sci.* **2021**, *9*, 618217. [CrossRef]
65. Vindigni, G.; Mosca, A.; Bartoloni, T.; Spina, D. Shedding Light on Peri-Urban Ecosystem Services Using Automated Content Analysis. *Sustainability* **2021**, *13*, 9182. [CrossRef]
66. Dragan, A.; Ispas, R.T.; Creţan, R. Recent Urban-to-Rural Migration and Its Impact on the Heritage of Depopulated Rural Areas in Southern Transylvania. *Heritage (2571-9408)* **2024**, *7*, 4282. [CrossRef]
67. Verdú-Vázquez, A.; Fernández-Pablos, E.; Lozano-Diez, R.V.; López-Zaldívar, Ó. Green space networks as natural infrastructures in PERI-URBAN areas. *Urban Ecosyst.* **2021**, *24*, 187–204. [CrossRef] [PubMed]
68. Escobedo, F.J.; Giannico, V.; Jim, C.Y.; Sanesi, G.; Lafortezza, R. Urban forests, ecosystem services, green infrastructure and nature-based solutions: Nexus or evolving metaphors? *Urban For. Urban Green.* **2019**, *37*, 3–12. [CrossRef]
69. Filho, W.L.; Barbir, J.; Sima, M.; Kalbus, A.; Nagy, G.J.; Paletta, A.; Villamizar, A.; Martinez, R.; Azeiteiro, U.M.; Pereira, M.J.; et al. Reviewing the role of ecosystems services in the sustainability of the urban environment: A multi-country analysis. *J. Clean. Prod.* **2020**, *262*, 121338. [CrossRef]
70. Dragan, A.; Creţan, R.; Jucu, I.S.; Hrițcu, A.A. Revitalizing post-communist urban industrial areas: Divergent narratives in the imagining of copper mine reopening and tourism in a Romanian town. *Cities* **2024**, *154*, 105379. [CrossRef]
71. Aziz, A.; Anwar, M.M.; Majeed, M.; Fatima, S.; Mehdi, S.S.; Mangrio, W.M.; Elbouzidi, A.; Abdullah, M.; Shaukat, S.; Zahid, N.; et al. Quantifying Landscape and Social Amenities as Ecosystem Services in Rapidly Changing Peri-Urban Landscape. *Land* **2023**, *12*, 477. [CrossRef]
72. Vejre, H.; Jensen, F.S.; Thorsen, B.J. Demonstrating the importance of intangible ecosystem services from peri-urban landscapes. *Ecological Complexity* **2010**, *7*, 338–348. [CrossRef]
73. Marshall, F.; Dolley, J.; Bisht, R.; Priya, R.; Waldman, L.; Randhawa, P.; Scharlemann, J.; Amerasinghe, P.; Saharia, R.; Kapoor, A.; et al. Recognizing peri-urban ecosystem services in urban development policy and planning: A framework for assessing agri-ecosystem services, poverty and livelihood dynamics. *Landsc. Urban Plan.* **2024**, *247*, 105042. [CrossRef]
74. Costemalle, V.B.; Candido, H.M.N.; Carvalho, F.A. An estimation of ecosystem services provided by urban and peri-urban forests: A case study in Juiz de Fora, Brazil. *Ciência Rural* **2023**, *53*, e20210208. [CrossRef]
75. Dragan, A.; Creţan, R.; Bulzan, R.D. The spatial development of peripheralisation: The case of smart city projects in Romania. *Area* **2024**, *56*, e12902. [CrossRef]
76. Bănică, A.; Istrate, M.; Muntele, I. Towards green resilient cities in eastern european union countries. *J. Urban Reg. Anal.* **2020**, *12*, 53–72. [CrossRef]
77. Adekunle, M.F.; Agbaje, B.M.; Kolade, V.O. Public perception of ecosystem service functions of peri—Urban forest for sustainable management in Ogun State. *Afr. J. Environ. Sci. Technol.* **2013**, *7*, 410–416. [CrossRef]
78. Dickinson, D.C.; Hobbs, R.J. Cultural ecosystem services: Characteristics, challenges and lessons for urban green space research. *Ecosyst. Serv.* **2017**, *25*, 179–194. [CrossRef]
79. Wang, C.; Jin, J.; Davies, C.; Chen, W.Y. Urban Forests as Nature-Based Solutions: A Comprehensive Overview of the National Forest City Action in China. *Curr. For. Rep.* **2024**, *10*, 119–132. [CrossRef]
80. Baránková, Z.; Špulerová, J. Human-Nature Relationships in Defining Biocultural Landscapes: A Systematic Review. *Ekológia* **2023**, *42*, 64–74. [CrossRef]
81. Xing, Y.; Brimblecombe, P. Trees and parks as "the lungs of cities". *Urban For. Urban Green.* **2020**, *48*, 126552. [CrossRef]
82. Rey-Gozalo, G.; Barrigón Morillas, J.M.; Montes González, D.; Vílchez-Gómez, R. Influence of Green Areas on the Urban Sound Environment. *Curr. Pollut. Rep.* **2023**, *9*, 746–759. [CrossRef]
83. Chen, X.; de Vries, S.; Assmuth, T.; Dick, J.; Hermans, T.; Hertel, O.; Jensen, A.; Jones, L.; Kabisch, S.; Lanki, T.; et al. Research challenges for cultural ecosystem services and public health in (peri-)urban environments. *Sci. Total Environ.* **2019**, *651*, 2118–2129. [CrossRef] [PubMed]
84. Mensah, C.A.; Andres, L.; Perera, U.; Roji, A. Enhancing quality of life through the lens of green spaces: A systematic review approach. *Int. J. Wellbeing* **2016**, *6*, 142–163. [CrossRef]
85. Cheng, X.; Van Damme, S.; Uyttenhove, P. A review of empirical studies of cultural ecosystem services in urban green infrastructure. *J. Environ. Manag.* **2021**, *293*, 112895. [CrossRef] [PubMed]
86. Irvine, K.N.; Herrett, S. Does ecosystem quality matter for cultural ecosystem services? *J. Nat. Conserv.* **2018**, *46*, 1–5. [CrossRef]
87. Kosanic, A.; Petzold, J. A systematic review of cultural ecosystem services and human wellbeing. *Ecosyst. Serv.* **2020**, *45*, 101168. [CrossRef]
88. Dragan, A.; Creţan, R.; Terian, M.I. Landscapes of Watermills: A Rural Cultural Heritage Perspective in an East-Central European Context. *Heritage* **2024**, *7*, 4790–4813. [CrossRef]

89. La Rosa, D.; Spyra, M.; Inostroza, L. Indicators of Cultural Ecosystem Services for urban planning: A review. *Ecol. Indic.* **2016**, *61*, 74–89. [CrossRef]
90. Nesbitt, L.; Hotte, N.; Barron, S.; Cowan, J.; Sheppard, S.R.J. The social and economic value of cultural ecosystem services provided by urban forests in North America: A review and suggestions for future research. *Urban For. Urban Green.* **2017**, *25*, 103–111. [CrossRef]
91. Ciesielski, M.; Gołos, P.; Stefan, F.; Taczanowska, K. Unveiling the Essential Role of Green Spaces during the COVID-19 Pandemic and Beyond. *Forests* **2024**, *15*, 354. [CrossRef]
92. Beckmann-Wübbelt, A.; Fricke, A.; Sebesvari, Z.; Yakouchenkova, I.A.; Fröhlich, K.; Saha, S. High public appreciation for the cultural ecosystem services of urban and periurban-forests during the COVID-19 pandemic. *Sustain. Cities Soc.* **2021**, *74*, 103240. [CrossRef]
93. Clarkson, B.D.; Kirby, C.L. Ecological restoration in urban environments in New Zealand. *Ecol. Manag. Restor.* **2016**, *17*, 180–190. [CrossRef]
94. Mell, I. Examining the Role of Green Infrastructure as an Advocate for Regeneration. *Front. Sustain. Cities* **2022**, *4*, 731975. [CrossRef]
95. Nevzati, F.; Veldi, M.; Külvik, M.; Bell, S. Analysis of Landscape Character Assessment and Cultural Ecosystem Services Evaluation Frameworks for Peri-Urban Landscape Planning: A Case Study of Harku Municipality, Estonia. *Land* **2023**, *12*, 1825. [CrossRef]
96. Gatarić, D.; Đerčan, B.; Živković, M.B.; Ostojić, M.; Manojlović, S.; Sibinović, M.; Lutovac, M. Can depopulation stop deforestation? The impact of demographic movement on forest cover changes in the settlements of the South Banat District (Serbia). *Front. Environ. Sci.* **2022**, *10*, 897201. [CrossRef]
97. Luo, S.; Patuano, A. Multiple ecosystem services of informal green spaces: A literature review. *Urban For. Urban Green.* **2023**, *81*, 127849. [CrossRef]
98. Kalfas, D.G.; Zagkas, D.T.; Dragozi, E.I.; Zagkas, T.D. Estimating value of the ecosystem services in the urban and peri-urban green of a town Florina-Greece, using the CVM. *Int. J. Sustain. Dev. World Ecol.* **2020**, *27*, 310–321. [CrossRef]
99. Sharma, P.; Ghimire, P. Assessment of Opportunities and Challenges of Urban Forestry in Nawalparasi District, Nepal. *Grassroots J. Nat. Resour.* **2019**, *2*, 53–62. [CrossRef]
100. Fors, H.; Molin, J.F.; Murphy, M.A.; Konijnendijk van den Bosch, C. User participation in urban green spaces—For the people or the parks? *Urban For. Urban Green.* **2015**, *14*, 722–734. [CrossRef]
101. Menconi, M.E.; Palazzoni, L.; Grohmann, D. Core themes for an urban green systems thinker: A review of complexity management in provisioning cultural ecosystem services. *Urban For. Urban Green.* **2021**, *65*, 127355. [CrossRef]
102. Sousa-Silva, R.; Feurer, M.; Morhart, C.; Sheppard, J.P.; Albrecht, S.; Anys, M.; Beyer, F.; Blumenstein, K.; Reinecke, S.; Seifert, T.; et al. Seeing the Trees Without the Forest: What and How can Agroforestry and Urban Forestry Learn from Each Other? *Curr. For. Rep.* **2024**, *10*, 239–254. [CrossRef]
103. Pereira, P.; Yin, C.; Hua, T. Nature-based solutions, ecosystem services, disservices, and impacts on well-being in urban environments. *Curr. Opin. Environ. Sci. Health* **2023**, *33*, 100465. [CrossRef]
104. Roeland, S.; Moretti, M.; Amorim, J.H.; Branquinho, C.; Fares, S.; Morelli, F.; Niinemets, Ü.; Paoletti, E.; Pinho, P.; Sgrigna, G.; et al. Towards an integrative approach to evaluate the environmental ecosystem services provided by urban forest. *J. For. Res.* **2019**, *30*, 1981–1996. [CrossRef]
105. Rodríguez-Morales, B.; Roces-Díaz, J.V.; Kelemen, E.; Pataki, G.; Díaz-Varela, E. Perception of ecosystem services and disservices on a peri-urban communal forest: Are landowners' and visitors' perspectives dissimilar? *Ecosyst. Serv.* **2020**, *43*, 101089. [CrossRef]
106. Xia, Z.; Yuan, C.; Gao, Y.; Shen, Z.; Liu, K.; Huang, Y.; Wei, X.; Liu, L. Integrating perceptions of ecosystem services in adaptive management of country parks: A case study in peri-urban Shanghai, China. *Ecosyst. Serv.* **2023**, *60*, 101522. [CrossRef]
107. Ianoș, I.; Cocheci, R.M.; Petrișor, A.I. Exploring the Relationship between the Dynamics of the Urban–Rural Interface and Regional Development in a Post-Socialist Transition. *Urban Sci.* **2024**, *8*, 47. [CrossRef]
108. Silva, R.F.B.; Rodrigues, M.D.A.; Vieira, S.A.; Batistella, M.; Farinaci, J. Perspectives for environmental conservation and ecosystem services on coupled rural-urban systems. *Perspect. Ecol. Conserv.* **2017**, *15*, 74–81. [CrossRef]
109. Semeraro, T.; Radicchio, B.; Medagli, P.; Arzeni, S.; Turco, A.; Geneletti, D. Integration of Ecosystem Services in Strategic Environmental Assessment of a Peri-Urban Development Plan. *Sustainability* **2020**, *13*, 122. [CrossRef]
110. Zhang, F.; Qian, H. A comprehensive review of the environmental benefits of urban green spaces. *Environ. Res.* **2024**, *252*, 118837. [CrossRef]
111. Ramyar, R. Social-ecological mapping of urban landscapes: Challenges and perspectives on ecosystem services in Mashhad, Iran. *Habitat Int.* **2019**, *92*, 102043. [CrossRef]
112. Roussel, F.; Schulp, C.J.E.; Verburg, P.H.; van Teeffelen, A.J.A. Testing the applicability of ecosystem services mapping methods for peri-urban contexts: A case study for Paris. *Ecol. Indic.* **2017**, *83*, 504–514. [CrossRef]
113. Le Roux, D.S.; Ikin, K.; Lindenmayer, D.B.; Manning, A.D.; Gibbons, P. The Future of Large Old Trees in Urban Landscapes. *PLoS ONE* **2014**, *9*, e99403. [CrossRef] [PubMed]
114. Ciesielski, M.; Stereńczak, K. What do we expect from forests? The European view of public demands. *J. Environ. Manag.* **2018**, *209*, 139–151. [CrossRef] [PubMed]

115. Ordóñez-Barona, C. How different ethno-cultural groups value urban forests and its implications for managing urban nature in a multicultural landscape: A systematic review of the literature. *Urban For. Urban Green.* **2017**, *26*, 65–77. [CrossRef]
116. O'Brien, L.E.; Urbanek, R.E.; Gregory, J.D. Ecological functions and human benefits of urban forests. *Urban For. Urban Green.* **2022**, *75*, 127707. [CrossRef]
117. Corine Land Cover. Available online: https://land.copernicus.eu/en/products/corine-land-cover (accessed on 2 August 2024).
118. Open Street Map. Available online: https://www.openstreetmap.org/ (accessed on 3 August 2024).
119. Geofabrik patform. Available online: https://www.geofabrik.de/data/download.html (accessed on 3 August 2024).
120. Bryman, A. Integrating quantitative and qualitative research: How is it done? *Qual. Res.* **2006**, *6*, 97–113. [CrossRef]
121. Banat Village Museum. Available online: https://muzeulsatuluibanatean.ro/ (accessed on 2 September 2024).
122. High School of Forestry and Agriculture "Casa Verde" Timișoara. Available online: https://lcasaverde.ro/index.php/scoala-noastra/despre-noi (accessed on 3 September 2024).
123. Plai Festival. Available online: https://www.plai.ro/ (accessed on 4 September 2024).
124. Codru Festival. Available online: https://www.codrufestival.ro/ (accessed on 4 September 2024).
125. Eco Timis Network. Available online: https://www.eco-timis-network.eu/ (accessed on 4 September 2024).

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.