



# Opportunities for the development of sustainable tourism in Sandomierz and the surrounding area in the opinion of residents

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## Authors' Contribution:

**A** - Study Design; **B** - Data collection;  
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<b>Abstract:</b>	<p>Title: The opportunities of the development of sustainable tourism in Sandomierz region in the opinion of residents</p> <p>Introduction: Too intensively tourist traffic in areas which are rich in nature and culture values may be associated with environmental degradation. To keep the environment safe and unpolluted, people need to implement environmentally friendly activities. Thanks to development of sustainable tourism there is a chance for maintenance of unique natural values and raise the standard of living the residents of attractive tourist destinations. There is no doubt that Sandomierz region has potential for development of sustainable tourism.</p> <p>The aim of the study: The main aim of the study was researching the opinions of residents of Sandomierz region, which allowed to determine whether there are opportunities for the development of sustainable tourism in Sandomierz region.</p> <p>Material and method: The research was conducted in July 2021, using the diagnostic survey method with the use of a questionnaire. The survey was conducted among 101 adult residents in the Sandomierz.</p> <p>Research results: The majority of respondents have knowledge in the field of sustainable tourism and they believe that the region of Sandomierz and surrounding area has predisposition to develop nature-friendly tourism. The biggest attraction of Sandomierz region are the natural values, as well as local and cultural events.</p> <p>Conclusion: Sandomierz region is an area of great tourist value, due to its natural attractiveness, landscapes and vineyards, which makes it possible to develop sustainable tourism. Despite the unique natural and cultural values, the infrastructure and tourism management are poorly developed, which should be changed by expanding the agritourism offer that favours sustainable tourism.</p>			
<b>Keywords:</b>	sustainable tourism, ecotourism, Sandomierz			

## Introduction

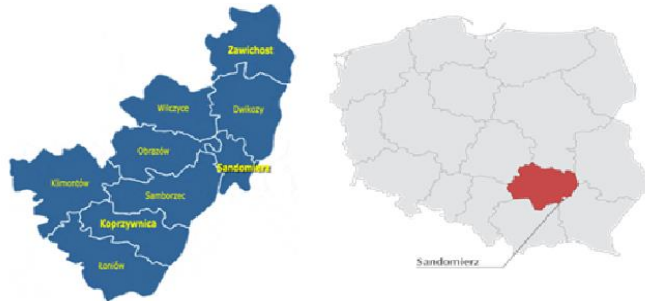
Tourism is one of the most important sectors affecting economic development. Due to its rapid development, it has become one of the largest industrial branches in the world [1]. It is a phenomenon that meets with interest in many fields of science mainly due to its multifaceted nature [2]. The World Tourism Organization [2] has given the following definition of this phenomenon: "Tourism includes all activities of persons who travel and stay for leisure, business or other purposes for no more than one year without interruption outside their daily surroundings, excluding trips whose main purpose is gainful activity remunerated in the visited locality" [3, 4]. Tourism is practiced by the majority of the population and has a range of occurrence all over the world. It should be properly organised and managed in such a way as not to affect the social and natural environment, taking into account its long-term functioning [5]. Unfortunately, when grown incorrectly, it has many negative effects, such as environmental pollution [6]. It is important that tourism is managed properly so that it does not create natural, cultural and social problems [6].

In view of the worrying changes that have been triggered by mass tourism activities, the concept of sustainable tourism has emerged, which underlines the need for rational and responsible management of environmental resources [7]. It defines the types of tourism that, when carried out correctly, will not pose a threat to the environments, both natural and socio-cultural [8]. For the first time, the definition of sustainable tourism was announced in 1996 by the World Tourism Organization, which refers to the management of all areas, such as economic, social and ecological, while maintaining the immutability of cultural and natural resources [9, 10]. In addition, it upholds traditions that influence the understanding of different cultures and mutual respect [6]. Sustainable tourism primarily cares for the natural environment as well as the social and cultural environment. It is important to manage it in a way that is appropriate for residents and tourists, and appropriate measures can lead to minimising the negative effects of tourism [6]. The concept of sustainable tourism is often associated with ecotourism. It is a type of tourist traffic based on maintaining sustainable development of natural values. It is based mainly on getting to know the values and expanding one's knowledge in this area [11]. Thanks to ecotourism, it is possible to develop regions whose most valuable value is nature, landscapes, different culture, or unusual species of flora and fauna, and at the same time opposed to mass tourism, which causes all pollution of ecosystems [12]. It is the "cleanest" form of environmentally friendly travel, due to the fact that it usually takes place in areas of the highest natural and landscape values. It directly contributes to the protection of the natural and cultural environment, and its participants are people with high ecological awareness and natural sensitivity [13].

So far, many scientific reports indicate the development of sustainable tourism of various destinations in Poland. Recently, the following have been analysed in terms of sustainable tourism: Bieszczady National Park [11], Knyszyńska Forest [14], Polish national parks [15], Lower Silesian landscape parks [16], Narew National Park [17], Podlasie Landscape Park Bug Gorge [18], Lublin Voivodeship [19], Aral Lake in Uzbekistan [20], Drawa National Park [21]. In Kiniorska's research [22], which analyses m.in cultural values of the Świętokrzyskie Voivodeship, we learn that out of almost 1000 objects entered in the register of monuments, there are 60 of them in Sandomierz, and it is considered the most attractive place of the Świętokrzyskie Voivodeship, where the Defert index was found at the level of 1093.1 [23]. In addition, Sandomierz has one of the highest rates of saturation of the tourist base. The conducted research has shown that the areas located around the towns famous for the numerous values of cultural heritage, i.e. Sandomierz, are of the greatest importance for the development of tourism in the Świętokrzyskie Voivodeship [24]. Sandomierz is one of the most important cities on the map of film tourism, and the popular series "Father Matthew", which is filmed in Sandomierz, has become a very effective form of promotion and increases tourist traffic, which in turn translates into financial benefits and quality of life of residents, and since the beginning of the broadcast of this series, a significant increase in tourist traffic in Sandomierz has been observed [25]. Based on the research carried out by the authors, it can be concluded that since the beginning of the broadcast of this series, a significant increase in tourist traffic in Sandomierz has been observed. Research conducted in 2014 by Faracik [24] shows that the TV series and the figure of Father Matthew are among the main associations with the city, with 15.2% of respondents declaring the series as one of the reasons for choosing Sandomierz as the place of arrival. In addition, the "Royal Town" is considered the richest city in monuments of the Kielce-Sandomierz Upland, and Sandomierz is one of the few cities in Poland that has the best preserved Old Town complex [25]. Other materials show that Sandomierz is one of the most valuable historical urban and landscape complexes of the Polish. The entire area of the historic urban and architectural complex of this city covers an area of about 40 ha, of which as many as 16 fall on today's "old town". It consists mainly of sacral buildings [24].

Sandomierz is located in the south-eastern part of Polish, within the borders of the Świętokrzyskie Voivodeship and the Sandomierz County. It is inhabited by about 100,000

inhabitants. Sandomierz is located on the Vistula River, and at the same time close to the mouth of the San River. The region lies on the border of the Sandomierz Upland and the Sandomierz Basin [24].



Location of Sandomierz

Source: [www.bip.um.sandomierz.pl 2021]

Due to the wide range of natural and cultural values, this area is extremely attractive for tourists. The diversity of the area allows for many forms of qualified tourism and cognitive tourism. Sandomierz is an intensively visited tourist destination, along with existing attractions nearby. Sandomierz and its surroundings are an area that has countless natural values. Among which the most important are areas: Natura 2000, nature reserves and natural monuments.

### **The aim of the study**

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The aim of the study was to analyze the opinions of residents, which concerned the possibilities of developing sustainable tourism in Sandomierz and the surrounding area. To this end, the following research questions were formulated:

1. Do the city of Sandomierz and its surroundings have opportunities to develop sustainable tourism?
2. How do residents assess the natural values of the research area?
3. What problems related to the development of tourism do residents notice?

### **Material and methods**

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The presented work examines the opinion of the inhabitants of Sandomierz and the surrounding area regarding the possibilities of developing sustainable tourism. The diagnostic survey method was used using the author's questionnaire. The questionnaire consisted of 23 closed questions, including 20 single and 3 multiple choice. After conducting the survey, counting the results, it was determined that all surveys were completed in the correct way. The survey was conducted among the residents of the city of Sandomierz and surrounding towns in July 2021, a total of 101 respondents were surveyed. The results of the research were calculated in the "Microsoft Excel" program, which are presented in the form of graphs.

### **Results**

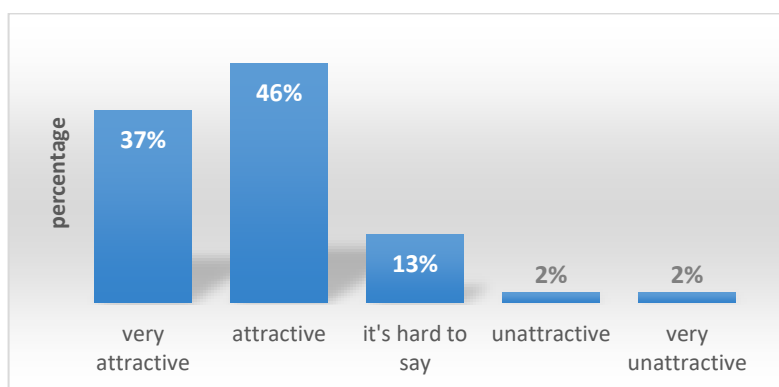
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As a result of surveys on the possibilities of developing sustainable tourism, the majority of research group were women – 59%, and 41% were men.

The largest group of respondents were people in the age range 18 – 25, it was 29% of respondents. The number of respondents aged 26-35 accounted for 12%, while those aged 36-45 took part in the survey with 19% of respondents. The age of 46-55 was indicated by 27% of respondents, and in the age range 56-65 there were 9% of respondents.

The smallest group, only 4%, were respondents over 65 years of age. The overwhelming group of respondents were people with secondary education, of which there were 61%. Respondents with higher education accounted for 25% of respondents, while 14% of survey participants declared essentially vocational education. None of the respondents indicated primary education.

Respondents were asked to indicate the natural attractiveness of their place of residence. The dominant group of respondents, 46% of respondents, cast their vote for the answer "attractive". The answer "very attractive" was chosen by 37% of respondents. 14% of respondents indicated the answer "it's hard to say". The least number of votes received the answer "very unattractive" and "unattractive", both one and the second answer was indicated by 2% of respondents (Figure 1).



**Figure 1.** Assessment of the natural attractiveness of Sandomierz and the surrounding area  
Source: based on own research

The form of nature protection, which is the "Pepper Mountains Nature Reserve" was assessed by 55% of respondents as "very attractive". On the other hand, 33% of respondents found it "attractive". Only 9% of people indicated the answer "moderately attractive", while 3% of respondents considered the reserve "unattractive". No person rated the reserve as "very unattractive" (Table 1).

The form of nature protection "Natura 2000 Area Tarnobrzeg Vistula Valley" was assessed by 58% of the inhabitants of Sandomierz and the surrounding area as "very attractive", and by 26% of respondents as "attractive". The answer "moderately attractive" was indicated by 14% of survey participants, and 2% of people rated the object as "unattractive". No respondent rated this form of nature protection as "very unattractive" (Table 1).

**Table 1.** Assessment of the attractiveness of forms of nature protection  
Source: based on own research

Name of nature conservation	Votes of respondents				
	Very unattractive	Unattractive	Moderately attractive	Attractive	Very attractive
Nature Reserve Góry Pieprzowe	0%	3%	9%	33%	56%
Nature Reserve Wisła pod Zawichostem	1%	2%	26%	47%	25%
Forest reserve Zielonka	1%	1%	23%	49%	27%
Natural monument Wąwóz Królowej Jadwigi	1%	2%	10%	42%	46%
Natura 2000 area Tarnobrzaska Dolina Wisły	0%	2%	14%	26%	59%

When asked about pro-ecological catering facilities, the vast majority of people, as many as 68% of respondents, confirmed that such facilities are located in the surveyed

area. Of the remaining answers, 4% of respondents said they were non-existent, while 28% of survey participants said they did not have such knowledge.

The respondents were asked to indicate attractions or cultural events that take place in the city of Sandomierz or surrounding towns. Each respondent could choose a maximum of 3 answers. The answer "local events and cultural events" received 33% of votes, "places of production and purchase of handicrafts" – 18% of votes, "places of cultivating and sharing local culture" gained 9% of votes, "local food and handicraft fairs" received 20% of votes, while the answers "places of production of modern products, inspired by tradition" and "places of production of local food / gastronomic products" received equally 10% of votes. None of the respondents indicated another event or attraction taking place in the surveyed area.

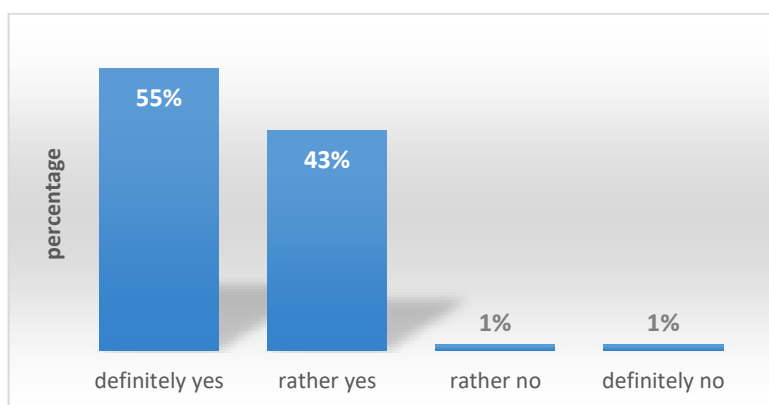
When asked about the problems related to the development of tourism in Sandomierz and the surrounding area, respondents answered that the biggest problem is the excess of tourists - 24% of votes and the lack of public transport - 20% of votes. The other problems indicated by the respondents were: a small number of tourist attractions – 16% of votes, poor tourist facilities – 14% of votes, seasonality of tourist traffic – 12% of votes. The answer no problems related to the development of tourism, received 14% of the votes of respondents.

The vast majority of respondents answered that there are rather too few pro-ecological agritourism farms (70%) and far too few (20%). Very few people answered that there are enough of them – 8% of respondents, and only 1% of responses received variants that there are rather too many pro-ecological agritourism farms and far too many.

Almost half of the respondents, 47% believed that in Sandomierz and the surrounding area regional food based on local products is rather served, while 34% of respondents strongly confirmed. The answer "rather not" was given by 13% of respondents, while 6% of respondents considered that such food is definitely not served in the surveyed area.

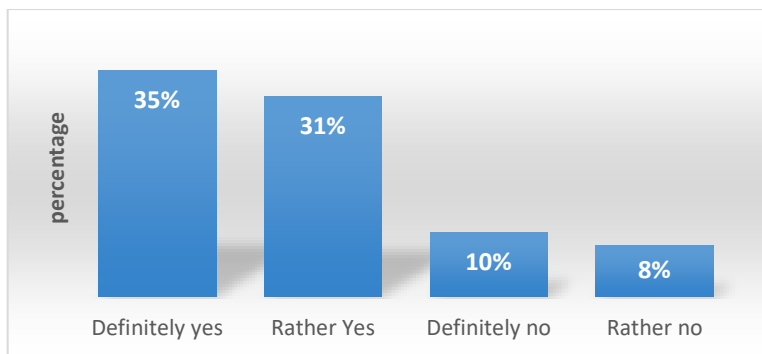
Respondents were asked whether the souvenirs sold to tourists are made by local residents, from materials of natural origin. The answer "rather yes" was declared by 36% of respondents" and 34% - "definitely yes". 12% of the surveyed residents chose the answer „definitely not”, and 18% of respondents – „probably not”.

In the opinion of 55% of respondents, tourism definitely benefits the inhabitants of the surveyed area. 43% of respondents indicated the answer "rather yes", and the answers "rather no" and "definitely no" indicated only 1% people (Figure 2).



**Figure 2.** Assessment of residents in terms of having benefits from the presence of tourism  
Source: based on own research

When asked about the tourist offer, based on local values and traditions, the majority of respondents – 59% indicated the answer "Rather yes", 25% of respondents answered "Definitely yes". 5% of residents answered 'definitely no' and 11% of respondents said 'probably not' (Figure 3).

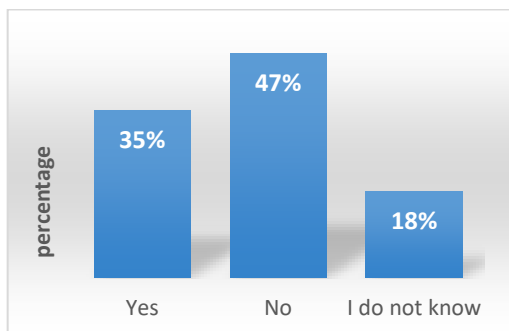


**Figure 3.** Evaluation of the tourist offer in Sandomierz and its surroundings  
Source: based on own research

More than half of the respondents – 53% – when asked whether local authorities and residents support the development of small businesses and local initiatives, answered "rather yes". 8% of respondents chose the answer "definitely yes". Residents of the study area in the group of 33% of people answered "rather not", and 6% of people answered "definitely not".

The same number of respondents – 39% answered that there are enough hiking trails and that they are missing. 21% of respondents decided that they do not have enough knowledge to answer this question by choosing the answer "I do not know".

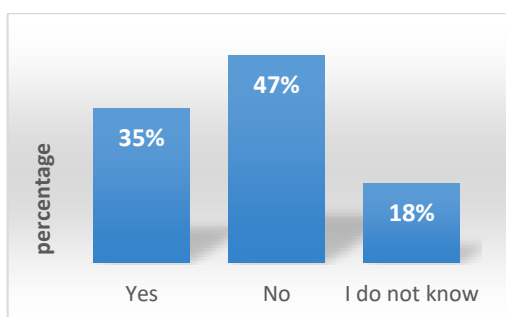
When asked about cycling routes, 35% of respondents believe that there are enough of them, while 47% of respondents believe that there are not enough of them. The answer "I do not know" was given by 18% of the surveyed people, which indicates a lack of such knowledge (Figure 4).



**Figure 4.** Assessment of the number of bicycle routes in Sandomierz and the surrounding area  
Source: based on own research

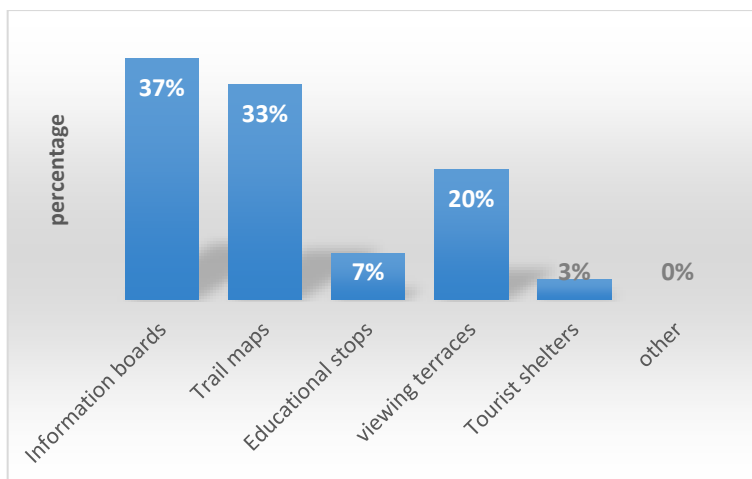
When asked whether agriculture is environmentally friendly in the surveyed area, 37% of respondents answered "rather yes", while 10% of respondents chose the answer "definitely yes". 33% of the respondents declared the answer "rather not", while 20% of the respondents answered "definitely no".

When asked whether the natural values of Sandomierz and the surrounding area are well preserved, 43% of people answered "definitely yes". The same number of people marked the answer "rather yes". The answer "definitely no" was chosen by 2% of respondents, and "probably not" was chosen by 10% of people (Figure 5).



**Figure 5.** Preservation of natural values of Sandomierz and the surrounding area  
Source: based on own research

Among the tourist infrastructure, the highest scored were such elements as: "Information boards" (37% of votes), "Trail maps" (33% of votes), "Observation decks" (20% of votes), "Educational stops" (7% of votes), "Tourist shelters" (3% of votes), while none of the surveyed people chose any other element of tourist infrastructure. Respondents could indicate a maximum of 2 such elements (Figure 6).

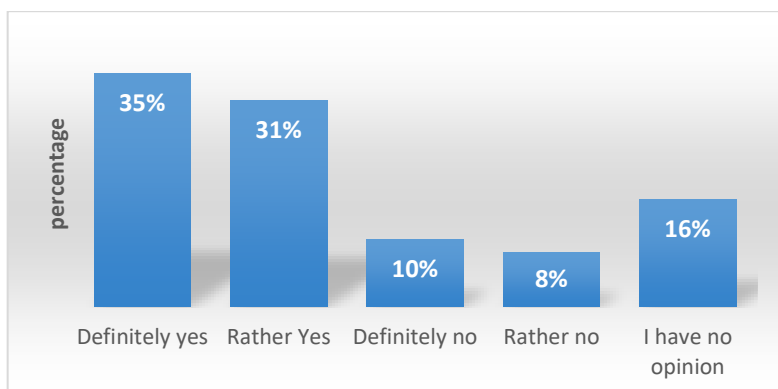


**Figure 6.** Elements most conducive to tourism in Sandomierz and the surrounding area

Source: based on own research

When asked whether the use of natural resources in Sandomierz and the surrounding area is carried out in a rational manner, 61% of respondents marked the answer "Rather yes", and "Definitely yes" indicated 18% of respondents. The answer "Probably not" was selected by 15% of respondents, and "Definitely not" by 6%.

35% of the inhabitants of Sandomierz and the surrounding area, when asked whether an eco-museum should be created, answered "Definitely yes", and 10% of the inhabitants, "Definitely not". The answer "Rather yes" was declared by 31% of respondents, while 8% of respondents chose the "Probably not" option. 16% of respondents chose the answer "I have no opinion" (Figure 7).



**Figure 7.** Assessment of the need to create eco-museums in Sandomierz and the surrounding area

Source: based on own research

The vast majority of respondents – 59% – answered that the presence of the Sandomierz Wine Trail definitely brings benefits to residents. 39% of respondents answered "rather yes". Only 2% of respondents indicated the answer "probably not". No person participating in the study marked the answer "definitely no".

When asked whether the surveyed area has the right conditions for the development of ecotourism, the answer "Definitely yes" was chosen by 52% of respondents, while the answer "Rather yes" was declared by 42% of respondents. Only 5% of people chose the answer "Probably not", while only 1% of people taking part in the survey indicated the answer "Definitely not".

## Discussion

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Sustainable tourism is a sustainable phenomenon [26]. With appropriate measures to satisfy both residents and tourists, sustainable tourism creates favourable conditions for its cultivation in a specific area [27]. The quality of the natural environment has a significant impact on the development of sustainable tourism. It also has an impact on the attractiveness of a given town or region. If tourists have a positive opinion about the quality of the environment, their number in a given area will increase [28]. Each tourist region with both natural and cultural values creates opportunities for the development of sustainable tourism. The management of tourism organisations should also be consistent with the economic development of the region concerned [29]. The massive development of tourism contributes to increased environmental degradation. It is therefore important to travel in a sustainable way that does not harm the natural and cultural ecosystems of the region [29]. Nowadays, tourist traffic in unique areas is so intense that it threatens not only tourist values, but also residents and worsens the quality of their lives [30]. Forecasts indicate that most tourists show a willingness to travel to places that are not frequented, which are not visited en masse, in order to contact nature. Such places are national parks, landscape parks and nature reserves [Rämet 2005]. It is essential that travel is sustainably done anywhere in the world. Tourists should consciously and responsibly use the advantages of a given tourist region, creating appropriate living conditions for residents and create ecotourism, which is based on learning about the values and expanding their knowledge in this area [8]. Thanks to ecotourism, it is possible to develop regions whose most valuable asset is nature, landscapes, different culture, or unusual species of flora and fauna, and at the same time opposed to mass tourism, which causes all kinds of pollution of ecosystems [12]. Thanks to tourists who appreciate all activities in the field of ecotourism, it is possible to earn money for the local community. They have the opportunity to develop their business with tourism and other environmental services [10]. The development of sustainable tourism also allows tourists to take part in various actions aimed at protecting the natural environment [13]. In addition, a group of such tourists has a positive impact on the tourist traffic of a given tourist region, as well as its inhabitants, who expand their knowledge and express their desire to protect their place of residence from excessive sightseeing. The inhabitants of an attractive tourist region have a great influence on the development of sustainable tourism through pro-ecological activities and involvement in the protection of cultural heritage and local traditions [9].

In this work, the respondents considered that Sandomierz and its surroundings are a very attractive region in terms of nature, which certainly has an impact on tourist traffic. In addition, the forms of nature protection existing there, m.in the Pepper Mountains Nature Reserve and the Queen Jadwiga Gorge, have been rated very high in terms of their attractiveness. This can largely determine the development of sustainable tourism in the area. Similar research carried out in the Bieszczady National Park indicates that the natural attractiveness of the subject the area was also extremely highly rated. According to the conducted research, the most visited places there are those that have not been developed by man [11]. On the other hand, in Lower Silesian landscape parks, not only natural but also cultural values have the greatest impact on the development of tourism [16]. Similar studies carried out in the Knyszyn Forest indicate that the natural attractiveness of the area has been assessed as very good. The area has an extremely large potential of the environment and unique natural values. In addition, respondents assessed that no air and water pollution is observed in the studied area, which indicates a very good condition of the natural environment [14]. In the research conducted in the Narew National Park, respondents indicated that the most important factor in the development of tourism in a given area are primarily unique natural values, naturalness of the area, as well as the lack of visible anthropogenic activities, e.g. the Narew Valley [17].



In the survey of this work, attention was also paid to pro-ecological agritourism farms. The vast majority of respondents indicated the lack of such facilities in Sandomierz and nearby towns. However, they express their desire for such places to be created. Research carried out in the Narew National Park shows that the number of pro-ecological agritourism facilities is surprisingly high. In addition, they are very positively evaluated due to their rich offers and attractions. Respondents also indicated that agritourism farms in the studied area operate on the principle of sustainable development, which is conducive to the development of sustainable tourism in the Narew National Park [17]. Similar results were obtained in the Podlaski Gorge of the Bug Landscape Park. According to the respondents, the number of agritourism farms operating on the principle of sustainable development is sufficient. The research emphasizes that such objects are recommended in areas rich in nature, with a large number of tourist attractions [18].

In Sandomierz and the surrounding area, the biggest problems related to the development of tourism are: excess tourist traffic, lack of public transport and poor infrastructure and tourist development. Among other things, the lack of sufficient accommodation, a small number of attractions for tourists, an insufficient number of tourist routes were indicated. Similar problems were also encountered in the Bieszczady National Park, where respondents indicated excessive tourist traffic and poor infrastructure that requires improvement as the main problem. Too few hiking trails and accommodation were also noticed. The authors pointed out that the Bieszczady National Park also lacks the introduction of appropriate innovations that will help in nature conservation [11]. Similar problems have been noticed in the Lower Silesian landscape parks. These included: excessive tourist traffic and seasonality of tourist traffic. Insufficient and poor tourist development was also noted, e.g. a small number of accommodation facilities, poorly developed tourist routes, lack of parking lots and parking spaces [16]. Prószyńska-Bordas and Parol [14] obtained similar results when examining the area of the Knyszyn Forest. The research shows that the biggest problem related to tourism was not very well developed public transport. Poor tourist development of the area was also noted, which requires development and changes. Michałowski and Kozak [18] obtained similar results when studying the Podlaski Gorge of the Bug Landscape Park. The most common problems related to the development of tourism, which were reported by respondents, were: too few accommodation facilities and their low quality. Reconstruction and introduction of innovations to this type of facilities would certainly affect the quality of the standard and services. It was also noted that the studied area lacks infrastructure accompanying m.in bathing areas, pitches, tennis courts, water equipment rental. Szczęsna [19], conducting research in the Lublin Voivodeship, showed that the biggest problems related to the development of tourism are primarily the lack of developed infrastructure and tourist development and the excess of tourists. The condition of roads and public transport was also negatively assessed. Similar problems were also encountered by the authors of the study conducted in the Aral Lake region of Uzbekistan. The results of the research indicated that the most important problems related to the development of tourism in the studied area are mainly: seasonality of tourist traffic and polluted air. In addition, the low quality of tourist infrastructure and the accompanying offer, as well as the lack of support from the local authorities [20], are also barriers to the development of ecotourism. Majewski [17] in his work carried out in the Narew National Park also encountered similar problems that are related to the development of tourism. The most important are: the lack of tourist attractions, tourist trails, educational paths, signs of tourist routes. The poor quality of roads and bicycle paths as well as the condition of technological devices, e.g. Access to the Internet, were also noted here. The problems presented by the author indicate poorly developed infrastructure and tourist development of the studied region. The main problem is also the lack of proper promotion of this area, as well as the lack of access to professional tourist information.

In the survey of this work, attention was paid to the benefits for residents of the presence of tourism in Sandomierz and the surrounding area. Respondents strongly

answered that the local community benefits such benefits. They have the opportunity to raise income through, for example, the operation of catering facilities, agritourism, etc. Respondents also indicated that souvenirs that are offered to tourists are made by the local community. In addition, the materials from which they are created have a natural origin. It was also pointed out that the presence of the Sandomierz Wine Trail has a significant impact on the residents, bringing them great benefits, for example material. Similar results were encountered while studying the area of the Knyszyn Forest.

Respondents unanimously decided that the occurrence of tourism brings great benefits to the local community [14]. Also in Polish national parks, research has shown that the development of tourism brings extremely large benefits to the inhabitants of the studied area in the form of, for example, new jobs, additional earnings in addition to a permanent position, as well as the development of their place of residence [15]. Similar results were obtained by Szczęśna [19] when conducting research in the Lublin Voivodeship. Respondents indicated that the development of tourism would certainly have a positive impact on the life of the local community. Residents would have the opportunity to open their own tourism businesses, gaining income and experience. The development of this type of phenomenon would also shape many towns in the Lubelskie Voivodeship, which, despite many attractive natural values, are unfrequented, and therefore also underdeveloped. As research shows, the area of the Aral Sea, which is also considered very attractive in terms of nature. The authors found that the local community lives in difficult housing conditions. Therefore, it was shown that the presence of tourism and its development would have a positive impact on the inhabitants of the studied region, finding permanent employment and a source of income. Moreover, the living conditions of the inhabitants of rural areas would certainly improve [20]. Similar results were obtained by studying the area of the Narew National Park. Respondents considered that the presence and development of tourism has a very positive impact on the inhabitants of the surveyed area. The local community benefits in the form of high earnings, also by setting up tourism-related activities. Agritourism farms or self-produced regional delicacies are particularly popular [17].

This work also draws attention to the activity of agriculture and the preservation of natural values, which, if managed in an improper way, could bring negative effects on nature and the inhabitants of Sandomierz and the surrounding area. However, the conducted research has shown that the natural attractions of the studied area are preserved in an appropriate, non-threatening way. Respondents also indicated that the use of natural resources in a given area is carried out in a rational manner. However, the problems related to the lack of organic farming may be noticed by respondents. A large group of respondents stated that agriculture grown near Sandomierz is not environmentally friendly. The Sandomierz region is famous for its intensively cultivated agriculture, which threatens to devastate unique natural values, inhabitants and degradation of the natural environment. An important aspect for the development of sustainable tourism is therefore the cultivation of environmentally friendly agriculture and the use of natural, permitted fertilizers. However, research carried out in the Lower Silesian landscape parks has shown that the greatest threat to these areas is the lack of proper preservation of natural and cultural values [16]. Similar results were obtained by Szczęśna [19] in research in the Lubelskie Voivodeship. In the studied area, the inability to properly preserve important natural and cultural values, which are the main attractions for the development of tourism in the studied area, was also noticed. In research carried out in the areas of the Aral Sea, similar threats were encountered. The lack of proper environmental management was noted, which contributes to the formation of many pollutants, among others: air pollution. An important threat is also improper preservation of natural values, which may in the future be associated with their complete loss [20].

In the surveys of this work, attention was paid to the development of the area and its attractions. First of all, pro-ecological catering facilities were distinguished, as well as local events, cultural events and local handicraft and food fairs. Such events in Sandomierz and

the surrounding area are very popular, which is why the increase in visitors to the region is noticeable. The listed elements of development and tourist attractions are of great importance in the development of sustainable tourism of the studied area. Also in the Knyszyńska Forest there are numerous attractions for tourists. The most important of these are cultural events, which attract large groups of participants, but also all the existence of attractions related to traditions [14]. However, research conducted in the Drawa National Park does not have optimistic results in these topics. Cultural events, which are an important aspect of the development of sustainable tourism, are not so popular in the studied area. The implementation of such events is very slow, and there are few participants in such events [21]. In the case of sustainable tourism, regional food is extremely important. In this paper, the respondents answered that such food is available. Examples of such regional delicacies can be, for example, Świętokrzyska brine, fruit compotes from the fields of local farmers. In addition, the region offers wines, ciders, juices and fudges produced in the Sandomierz area. Also in the case of the city of Toruń, regional delicacies are served, which is conducive to the development of sustainable tourism. They are based on local products, served in restaurants and bars that maintain the idea of sustainable development. Similar results were noticed in the Narew National Park. Local delicacies and regional food are served there. They are based on local products and are produced by the local society. Thanks to the principles of sustainable development, the region also has an opportunity to develop sustainable tourism [17].

In this work, the conducted research allowed to collect results regarding the possibilities of developing ecotourism in Sandomierz and the surrounding area. According to the respondents, this region has a chance to develop this type of tourism. The main features of the area that give it such an opportunity are primarily: appropriate conditions for the creation of ecomuseums, a wealth of natural and cultural values, cultural attractions, the potential of the area to create new objects in the field of infrastructure and tourist development. In addition, tourism in Sandomierz and the surrounding area is based on tradition and local values, which gives a chance for the development of ecotourism in the studied area. Similar results were obtained in the Knyszyn Forest. The authors of the research received information that the studied region has an extremely high potential for the development of this type of tourism due to the natural richness, cultural values based on traditions and culture, and the awareness of residents in the field of sustainable development [14]. Also, the authors of the research work in the Lower Silesian landscape parks showed that there is a chance for the development of ecotourism. This is mainly due to existing traditions, cultural events, as well as the richness of natural values of the studied region [16]. Similar results were obtained by Michałowski and Kozak [18] in the research of the Podlaski Gorge of the Bug Landscape Park. The authors, after drawing the appropriate conclusions, believe that the area has the right conditions for the development of ecotourism due to the natural richness of the area, the presence of pro-ecological agritourism facilities, but also thanks to many cultural attractions in villages located near the park. The author of the work on Polish national parks also met with similar conclusions. National parks have an extremely high potential for the development of this type of tourism due to their natural and landscape values, etc. The presence of m.in nature museums or more educational or didactic paths can certainly influence the development of ecotourism in the studied areas [15].

## **Conclusion**

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The results presented in the paper confirm that the area of Sandomierz and the surrounding towns have appropriate conditions and opportunities for the development of sustainable tourism. This is mainly due to the richness of unique natural and cultural values. This area has the potential to introduce many amenities for tourists and residents, as well as to introduce pro-ecological solutions. Examining the area on the basis of the knowledge of the local community allowed to formulate the following conclusions:

- Sandomierz together with the surrounding towns is an area with a large number of tourist values, due to its natural attractiveness, unique landscapes and vineyards, which can determine the development of sustainable tourism. The presence of cultural values, e.g. regional, pro-ecological food and cultural events, food fairs, workshops, shows, etc., also has a great impact on the development of this type of tourism.
- Residents of Sandomierz and the surrounding area believe that the natural values occurring in the studied area are very attractive, in particular: the Pepper Mountains Nature Reserve, the Queen Jadwiga Gorge and the Natura 2000 area Tarnobrzaska Dolina Wisła. Sandomierz and its surroundings have highly rated places related to nature, which are often visited by tourists, which certainly affects the tourist traffic of the entire region.
- Research shows that the biggest problems are: excess tourist traffic and the lack of well-developed public transport. Sandomierz is visited by an unusually large number of tourists per year. This is a problem for residents, especially functioning and everyday life. In addition, residents also pointed out the problem of public transport. This proves that the infrastructure and tourist development are not well developed in the studied area. The problems indicated by the respondents show that the region needs enlargements and innovations, mainly in the form of pro-ecological solutions, so that tourist traffic does not affect the lives of residents, but also does not threaten unique protected areas.

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