



## OPPORTUNITIES FOR EVALUATION OF SUSTAINABLE TOURISM – ASSESSING THE AVAILABILITY OF ETIS INDICATORS IN POLAND

Agnieszka Niezgoda<sup>a</sup> 

<sup>a</sup> Poznań University of Economics and Business (Poland), Institute of International Business and Economics, Department of International Economics, <https://orcid.org/0000-0002-2456-1633>, e-mail: [Agnieszka.niezgoda@ue.poznan.pl](mailto:Agnieszka.niezgoda@ue.poznan.pl)

**How to cite (APA style):** Niezgoda, A. (2023). Opportunities for evaluation of sustainable tourism – assessing the availability of ETIS indicators in Poland. *Turyzm/Tourism*, 33(1), 57–66. <https://doi.org/10.18778/0867-5856.33.1.06>

### ABSTRACT

The purpose of the article is to evaluate the possibilities of evaluating sustainable tourism in Polish tourist regions, in particular, through the use of ETIS indicators and to assess for the availability of data for their calculation in the nationwide statistical system. Qualitative research methodology was used to study the availability of ETIS indicators. A diagnostic type research procedure was adopted and the desk research method was used. In a situation where the data necessary for calculating a given indicator was not found in the available sources, primary research in the form of direct interviews with representatives of branches of Statistical Offices was used. In order to quantify the availability of ETIS indicators, a system for their evaluation was adopted and aggregate indicators were proposed for the evaluation of sections and individual criteria in the section, which is the author's attempt to develop a unified system for evaluating sustainable tourism indicators.

The results of the study showed that the availability of data for calculating ETIS indicators in Poland is not satisfactory. The lowest rating was given to the availability of indicators that facilitate the management of the resort, including the tourists' satisfaction survey (section A). Also rated very low was the availability of indicators of the environmental impact of tourism in a resort (section D). The results obtained confirm the results of studies by other authors dealing with the issue of the real use of ETIS in tourist regions of other countries.

### KEYWORDS

sustainable tourism, ETIS indicators, destination management

### ARTICLE INFORMATION DETAILS

Received:  
13 December 2022  
Accepted:  
15 February 2023  
Published:  
5 May 2023

## 1. INTRODUCTION

The basic definition of the report of the World Commission on Environment and Development is that sustainable development is economic and social development that will ensure that the needs of contemporary society are met without compromising

the needs of future generations (Światowa Komisja ds. Środowiska i Rozwoju, 1991). Such an approach requires consideration of both theoretical foundations and practical actions based on the pursuit of ecological, economic and socio-cultural goals in a specific area.

The concept of sustainable tourism arises from the translation of the principles of broadly understood

sustainable development into various areas of the economy (Niezgoda, 2006) and can be regarded as the result of research into the links between tourism, the environment and development processes (Sharpley, 2002). Implementing sustainable tourism in specific areas requires detailing general recommendations so as not to create conflicts in the natural, social and economic environment (Breiby et al., 2022; Eagles, McCool, Haynes, 2002; Overvåg, Skjeggedal, Sandstrom, 2015; World Tourism Organization [WTO], 2004). The development of sustainable tourism is a process and not a state, so planning and evaluation of its implementation is essential. Entities responsible for tourism planning and development are constantly looking for new concepts and solutions that can be used in policy and management of tourist reception areas (Alejziak, 2016). As Marković Vukadin, Zovko, Krešić (2020) note the abundance of systems, initiatives and projects ultimately brings significant confusion to destination management bodies. It has become necessary to develop a unified system of sustainable tourism indicators.

In the last decade, one of the proposed solutions is "The European Tourism Indicator System toolkit for sustainable destination management" (ETIS). In 2013 the European Commission presented a pilot set of these indicators, which was then used by about 100 countries (European Commission, 2016). Based on the results from the pilot, an improved set of ETIS indicators was introduced (2016) which can be considered tested, comprehensive and applicable to different conditions of individual countries (Krajnović, Zdrilić, Miletić, 2020). It is noted that in the process of calculating indicators, data availability, sampling issues and measurement errors are a problem (Pavlinović Mršić, Čale, 2020; Scheyvens, Biddulph, 2018). The authors note that problems in calculating sustainable tourism indicators require careful analysis of the costs associated with the process (Marković Vukadin, Zovko, Krešić, 2020).

The aim of this article is to assess the possibilities of evaluating sustainable tourism in Polish tourist regions, in particular through the use of ETIS indicators, and to evaluate the indicators in terms of the availability of data for their calculation in the nationwide statistical system. Most sustainable tourism researchers focus on local-scale and short-term issues within administratively-defined units (Blancas et al., 2016; Dimoska, Petrevska, 2012; Krajnović, Zdrilić, Miletić, 2020; Lew et al., 2016; Torres-Delgado, López Palomeque, 2014), while this study attempts to comprehensively assess the availability of data to calculate indicators nationwide using a nationwide statistical data collection system.

## 2. ETIS INDICATOR SYSTEM

### – ESSENCE AND FUNDAMENTALS

Many authors believe that for solving environmental problems, the optimal level of decision-making and implementation is located below the national level, hence the importance of the regional and local levels (Awedyk, Niezgoda, 2018; Marković Vukadin, Zovko, Krešić, 2020). In accordance with such an assumption, a set of ETIS indicators was designed for the local level, in particular for places receiving tourists, referred to in the documents as destinations.

Initial proposals for sustainable tourism indicators focused on environmental issues, such as those proposed by the European Environment Agency (Pulido-Fernández, Sánchez-Rivero, 2009). The ETIS indicators reflect a broader, comprehensive view of sustainable development and reflect a diagnosis of the situation, not only with regard to the natural environment, but also the social and economic environment.

The system consists of 43 core indicators reflecting:

- Section A: Destination management,
- Section B: Economic value,
- Section C: Social and cultural impact,
- Section D: Environmental impact.

As many authors have pointed out (Blancas et al., 2016; Castellani, Sala, 2010; Font et al., 2021), sustainability indicators are essential:

- to monitor sectoral development so as to facilitate the assessment of tourism policies and practices;
- to measure sectoral progress and develop suitable strategies for a preferred future;
- to communicate knowledge via the generation of quantitative and objective data that provide a fuller understanding of tourist phenomena in their spatial context.

The ETIS highlights that the proposed indicators can be used on a voluntary basis, either by using them together or by integrating them with existing center monitoring systems. This flexibility is an advantage, as acquisition costs may be too high and not all indicators may be available. The selection of indicators should be made by the managers of the site being a tourist destination (Font et al., 2021), as well as organizers of events held at the resort (Maguire, McLoughlin, 2020). The set used in a specific location can be expanded or reduced to meet the needs of the place (municipality, locality). Thus, in order to develop sustainable tourism for managers in places receiving tourists, the question arises as which of the proposed indicators should be chosen and what are the possibilities of obtaining them. Therefore, it is necessary to assess the availability of each ETIS indicator.

### 3. SURVEY METHODS

In different countries, the systems for collecting and making available statistical data can widely differ. According to the Ministry of Development, Labor and Technology, the availability of a sustainable tourism indicator should be understood as its achievability (availability of data, calculation possibilities) for tourism development managers (Niezgoda, Janczak, Patelak, 2020). The starting point for initiating research should be to look for secondary sources, i.e. data already collected (including for other purposes). The easier and less costly it is to obtain these data, the greater the availability. In the absence of the possibility of obtaining secondary data, primary research can be undertaken, but it is expensive (Brătucu et al., 2017; Torres-Delgado, Saarinen, 2019), time-consuming (Niezgoda, Janczak, Patelak, 2021) and requiring the cooperation of many stakeholders (Blažević et al., 2013; Fitzgerald et al., 2012).

In the study of the availability of ETIS indicators made for this article, qualitative research methodology was used. A research procedure of the diagnostic type was adopted and the method of desk research, i.e. analysis of the situation using found data from secondary sources (qualitative content analysis) was used. In a situation where the data necessary for calculating a given indicator was not found in the available sources, primary research was used in the form of direct interviews with representatives of the provincial branches of the statistical offices relevant to a given area of interest. The interview was conducted in the form of an online conversation with the person responsible in the office in question for collecting the data needed to calculate indicators from a specific section.

In order to quantify the accessibility of ETIS indicators, an appropriate rating system was adopted. For each indicator, a maximum point value (from 1 to 3) was assigned, which reflects the spread of possible evaluation (Majewska, 2018) of a given indicator in terms of accessibility in Polish conditions. An indicator was assessed at a value of 1 when it was examined that in the Polish reporting system it is not possible to obtain

data to calculate the indicator using secondary sources and it is necessary to collect data in a primary survey. On the other hand, when data are available only at the national or provincial level, and not at the regional level, 2 points were awarded, when data are available in public statistics on a regional/municipal basis – the indicator was assessed at 3 points.

In order to assess the availability of indicators across sections, aggregate indicators (section ratings and ratings of indicators of individual criteria in the section) can be proposed. Due to the fact that there is a varying number of indicators in each section, aggregating indicators were used to score the overall availability in a specific section. The index for scoring the accessibility of a section is the sum of the ratings of indicators in the section divided by the number of indicators in the section.

$$D_s = \sum \frac{D_{ws}}{N_{ws}}$$

Similarly, accessibility assessment indicators were calculated for each of the criteria in the sections.

### 4. EVALUATION OF THE AVAILABILITY OF ETIS INDICATORS – RESEARCH RESULTS

The indicators in Section A relate to opportunities from the field of tourism destination area management (Table 1). Indicator A.1.1 assesses the extent to which companies actively integrate sustainability principles into their operations and whether they engage in green certification programs. The problem is the large number of tourism certifications and labels awarded based on various criteria (Niezgoda, 2011).

The indicators in group A.2 illustrate the satisfaction of tourists, which translates into a positive image of the region and the possibility of repeat visits. However, under the conditions of the Polish reporting system, calculation of these indicators is not possible. It should also be noted that the collection of data would require coordination between places of accommodation, which

Table 1. Evaluation of the availability of ETIS indicators in Section A: Destination management

Criterion	Indicator	Rating availability
A.1 Sustainable tourism management in tourism enterprises	A.1.1 Percentage of tourism enterprises/establishments in the destination using a voluntary verified certification/labelling for environmental/quality/sustainability and/or Corporate Social Responsibility measures	1
A.2 Customer satisfaction	A.2.1 Percentage of visitors that are satisfied with their overall experience in the destination	1
	A.2.2 Percentage of repeat/return visitors (within 5 years)	1

Source: author.

Table 2. Evaluation of the availability of ETIS indicators in Section B: Economic value

Criterion	Indicator	Rating availability
B.1 Tourism flow (volume & value) at destination	B.1.1 Number of tourist nights per month	3
	B.1.2 Number of 'same day' visitors per month	1
	B.1.3 Relative contribution of tourism to the destination's economy (% GDP)	2
	B.1.4 Daily spending per overnight tourist (accommodation, food and drinks, other services)	2
	B.1.5 Daily spending per same day visitor	2
B.2 Tourism enterprise(s) performance	B.2.1 Average length of stay of tourists (nights)	3
	B.2.2 Occupancy rate in commercial accommodation establishments per month and average for the year	3
B.3 Quantity and quality of employment	B.3.1 Direct tourism employment as percentage of total employment	2
	B.3.2 Percentage of jobs in tourism that are seasonal	2
B.4 Tourism supply chain	B.4.1 Percentage of locally produced food, drink, goods and services sourced by the destination enterprises	1

Source: author.

is an extremely difficult measure, since visitors may use different types of accommodation that are not connected by a common reporting system.

Another group of indicators relates to the economic objectives that sustainable tourism should provide. In the ETIS, these are the economic impact indicators in Section B (Table 2).

A popular indicator depicting the interest of tourists in staying at a particular facility is indicator B.1.1. This is characterized by high accessibility because the data can be obtained free of charge from the GUS, based on the reporting information provided by accommodation facilities in the KT-1 form. The reporting results are available at the level of provinces, counties and municipalities. It should be noted, however, that there are many facilities in highly attractive tourist destinations that are not reflected in the reporting (the so-called 'underground economy').

Indicator B.1.2 is difficult to calculate, since data can be obtained from the number of admission tickets sold to attractions (e.g. museums, attractions, national parks), or for income from catering and attractions, after deducting estimated income from tourists using accommodation. The data needed to calculate indicators B.1.3, B.1.4 and B.1.5 for localities (municipalities and counties) are very difficult to obtain. Within the framework of GUS reporting, expenditures on tourists are collected in the Travel survey of Poles. However, the manner of the survey (sample) determines that these surveys are representative only at the national and provincial level.

The performance of tourist enterprises in the area receiving tourists is illustrated by indicators B.2.1 and

B.2.2, which are readily available, as the data for their calculation are obtainable free of charge in reporting from GUS (form KT-1).

A basic element of the tourist economy in a region is the quantity and quality of employment, which is illustrated by indicators B.3.1 and B.3.2. The data necessary for calculating indicators for tourist destinations are obtainable from the GUS on the basis of the data contained in the Z-05 form. Data can also be obtained in a primary survey directly from employers. Indicator B.4.1 is designed to reflect the percentage of locally produced food, beverages, goods and services from tourism enterprises in a resort and corresponds to one of the basic ideas of sustainable tourism (Sangchumnong, 2019), but in the Polish reporting system, data for its calculation are not available from secondary sources.

When examining the feasibility of implementing sustainable tourism, many authors emphasize the importance of social and cultural goals (Breiby et al., 2022; Kowalczyk, 2010; Sangchumnong, 2019) in the ETIS 2016 achievement of these goals is intended to reflect the indicators in Section C (Table 3).

A well-known and readable indicator is C.1.1, which is available free of charge in GUS reporting at the national, provincial and county levels, but only to overnight visitors, i.e. tourists, without including day visitors. An indicator reflecting the impact of tourism on residents' quality of life (C.1.2), is not available, as it would require detailed primary research of a qualitative nature. A popular and available indicator is C.1.3 showing the number of beds available in commercial accommodation facilities per 100 residents. Data can

Table 3. Evaluation of the availability of ETIS indicators in Section C: Social and cultural impact

Criterion	Indicator	Rating availability
C.1 Community / social impact	C.1.1 Number of tourists per 100 residents	3
	C.1.2 Percentage of residents who are satisfied with tourism in the destination (per month/season)	1
	C.1.3 Number of beds available in commercial accommodation establishments per 100 residents	3
	C.1.4 Number of second homes per 100 homes	1
C.2 Safety and health	C.2.1 Percentage of tourists who register a complaint with the police	2
C.3 Gender equality	C.3.1 Percentages of men and women employed in the tourism sector	3
	C.3.2 Percentage of tourism enterprises where the general manager position is held by a woman	3
C.4 Inclusion / accessibility	C.4.1 Percentage of rooms in commercial accommodation establishments accessible to people with disabilities	3
	C.4.2 Percentage of commercial accommodation establishments participating in recognized accessible information schemes	1
	C.4.3 Percentage of public transport that is accessible to people with disabilities and with specific access requirements	2
	C.4.4 Percentage of tourist attractions that are accessible to people with disabilities and/or participating in recognised accessibility information schemes	1
C.5 Protecting and enhancing cultural heritage, local identity and assets	C.5.1 Percentage of residents that are satisfied with the impact of tourism on destination identity	1
	C.5.2 Percentage of the destination's events that are focused on traditional/local culture and heritage	2

Source: author.

be obtained free of charge from GUS reporting by country, province and county. Indicator C.1.4 showing the number of second homes due to the current law (RODO) is not available. The safety and health category, in the ETIS system is represented by only one indicator, C.2.1, for the calculation of which data can be obtained directly from police headquarters. Gender equality in the ETIS system is reflected in section C.3 represented by two indicators: C.3.1 and C.3.2. The data necessary for their calculation can be obtained from the CSO (form Z-05 or Z-06).

The next group (C.4) includes indicators showing the equality and accessibility of tourism for different groups of people, which is one of the more important demands of sustainable tourism. The primary indicator from this group is C.4.1, for the calculation of which data is available at the level of provinces, counties and municipalities in GUS reporting (form KT-1). Subsequent indicators C.4.2, C.4.3 and C.4.4 reflect the issue of accessibility of regions for tourists with disabilities. The data necessary for calculating indicators C.4.2 and C.4.4 are obtainable using the

desk research method of the websites of facilities or Local Tourist Organizations. Special websites are also being created (e.g. Pantou: <https://pantou.org/>) where facilities can report their offerings for people with disabilities. Data for calculating indicator C.4.3 is not available from secondary sources, but can be obtained directly from carriers.

Another group of indicators focuses on the protection and enhancement of cultural heritage, local identity and cultural assets. Indicator C.5.1 is not available from secondary sources of the nationwide data collection system. At the local level, however, data can be obtained from municipal (city) offices to calculate the second indicator in this group, showing the percentage of events in the center that focus on traditional/local culture and heritage (C.5.2).

Section D reflects the impact of tourism on the natural environment. Group D.1 contains indicators reflecting important issues related to the need to reduce the impact of transportation, but in the Polish statistical system the data needed to calculate all indicators of this group are not available from secondary sources. The

Table 4. Assessment of the availability of ETIS indicators in Section D: Environmental impact

Criterion	Indicator	Rating availability
D.1 Reducing transport impact	D.1.1 Percentage of tourists and same day visitors using different modes of transport to arrive at the destination	1
	D.1.2 Percentage of tourists and same day visitors using local/soft mobility/public transport services to get around the destination	1
	D.1.3 Average travel (km) by tourists and same day visitors from home to the destination	1
	D.1.4 Average carbon footprint of tourists and same day visitors traveling from home to the destination	1
D.2 Climate change	D.2.1 Percentage of tourism enterprises involved in climate change mitigation schemes—such as: CO2 offset, low energy systems, etc. – and ‘adaptation’ responses and actions	1
	D.2.2 Percentage of tourism accommodation and attraction infrastructure located in ‘vulnerable zones’	1
D.3 Solid waste management	D.3.1 Waste production per tourist night compared to general population waste production per person (kilos)	1
	D.3.2 Percentage of tourism enterprises separating different types of waste	3
	D.3.3 Percentage of waste recycled per tourist compared to total waste recycled per resident per year	1
D.4 Sewage treatment	D.4.1 Percentage of sewage from the destination treated to at least secondary level prior to discharge	1
D.5 Water management	D.5.1 Water consumption per tourist night compared to general population water consumption per resident night	1
	D.5.2 Percentage of tourist enterprises taking actions to reduce water consumption	1
	D.5.3 Percentage of tourism enterprises using recycled water	1
D.6 Energy usage	D.6.1 Energy consumption per tourist night compared to general population energy consumption per resident night	1
	D.6.2 Percentage of tourism enterprises that take actions to reduce energy consumption	1
	D.6.3 Annual amount of energy consumed from renewable sources (MWh) as a percentage of overall energy consumption at destination level per year	1
D.7 Landscape and biodiversity protection	D.7.1 Percentage of local enterprises in the tourism sector actively supporting protection, conservation, and management of local biodiversity and landscapes	2

Source: author.

next group (D.2) also notes the lack of availability from secondary sources. To calculate indicator D.2.1, data can be collected from surveys of construction permits or notifications of intent to carry out construction works, but they may be incomplete and not very specific. To calculate indicator D.2.2, data collected directly from the spatial development plans of a specific territorial unit can be used. Group D.3 includes indicators for solid waste management, and group D.4 includes an indicator showing wastewater treatment. These indicators in Poland cannot be calculated on the basis of secondary data from nationwide statistics, and direct research is highly difficult, due to the waste collection system in

place (dispersion depending on the locality). Group D.5 indicators reflecting water management issues and Group D.6 indicators indicating energy consumption are also impossible to calculate from secondary sources available from Polish reporting. On the basis of municipal and EU programs, municipal offices or marshal offices may have this type of data, but the data may vary for different territorial divisions. Last in the list is the criterion: Landscape and Biodiversity Protection, which is assessed by indicator D.7.1 The data necessary for the calculation can be obtained directly from entrepreneurs at the municipal level, while it cannot be obtained from public reporting.

The concept of sustainable tourism provides a starting point for practical applications in a specific area, but it does not provide solutions for tourism development that are useful for every place and at every time. According to the idea of the authors of the ETIS, tourist reception areas can take measures to evaluate sustainable tourism by selecting indicators that are useful in a specific region (Font et al., 2021).

In order to assess the availability of indicators in each section, we used indicators that aggregate section evaluations and ratings of individual criteria in the section (Table 5).

Table 5. Indicators aggregating section ratings and individual criteria ratings in the section

Section	Criterion	Rating availability
<b>A</b>	x	1
	A1	1
	A2	1
<b>B</b>	x	2
	B1	2
	B2	3
	B3	2
<b>C</b>	B4	1
	x	2
	C1	2
	C2	2
	C3	3
<b>D</b>	C4	1.75
	C5	1.5
	x	1.18
	D1	1
	D2	1
	D3	1.67
	D4	1
	D5	1
D6	1	
D7	2	

Source: author.

The results of the study show that in Poland's conditions, the lowest ratings were given to accessibility in section A on resort management and section D reflecting the environmental impact of tourism at the resort.

## 5. DISCUSSION

The presented research results show that in Poland the availability of indicators is unsatisfactory, which confirms the findings of other authors (Krajnović, Zdrilić, Miletić, 2020; Pavlinović Mršić, Čale, 2020; Tudorache et al., 2017; Zabetta, Sacerdotti, Mauro, 2014).

The lowest rating was given to accessibility in Section A, which implies the difficulty of collecting data for indicators that facilitate resort management, including the survey of tourist satisfaction. Also rated very low was the accessibility of Section D reflecting the environmental impact of tourism at the resort, an indication of the need to improve reporting in this area. Surprisingly, of the proposed indicators in Section D reflecting the environmental impact of tourism (with the exception of the indicator, D3.2, where the data is complete due to the obligation to segregate garbage), there are none for the calculation of which secondary data from Polish public statistics could be used. Collecting primary data specifically for the construction of an indicator is a costly and time-consuming task, and for some indicators it is also often unfeasible. This confirms the conclusions reached by other authors studying the possibility of using ETIS indicators in other regions (Gasparini, Mariotti, 2021; Maguire, McLoughlin, 2020; McLoughlin, Hanrahan, Duddy, 2020; Pavlinović Mršić, Čale, 2020; Tudorache et al., 2017) as well as the conclusions of Font et al. (2021) that using indicators to improve sustainability is not an entirely realistic task.

The broad proposal of C and D section indicators makes it possible to move away from authors' noted dominance of the economic point of view in looking at tourism (Kazimierzak, 2010). But it can be noted that there is a lack of indicators reflecting the impact of tourism on changes in the occurrence of flora and fauna in designated areas due to tourism. There is also no indicator that shows the problem of light litter and noise, which are factors that not only affect the animal world but also determine the attractiveness of the stay of tourists seeking rest in nature.

In Poland, the most opportunities to calculate ETIS indicators using public reporting are found in Section B reflecting economic objectives, and Section C showing social and cultural objectives. Studying the availability of ETIS indicators in Italy, Modica et al. (2018) showed the high availability of indicators of section B, while they assessed the availability of section C much less well. However, many authors agree that the biggest problem is the very low availability of section D (Modica et al., 2018; Pavlinović Mršić, Čale, 2020; Tudorache et al., 2017).

However, despite its shortcomings, the ETIS system has advantages. First, the use of indicators, especially from sections A, B and D, allows costs to be reduced which leads to an increase in the bottom line (Marković

Vukadin, Zovko, Krešić, 2020). Secondly, the use of indicators from sections C and D allows expectations and impressions of visitors to be better met, since a clean environment (Breiby et al., 2022) and supporting local culture (Markiewicz, Niezgoda, 2022) are competitive advantages of a tourism product. At the same time, the use of ETIS indicators by different regions enables the collaboration and benchmarking recommended by the UNWTO (*UN standards for measuring tourism*, 2008).

## 6. CONCLUSIONS

The idea of sustainable tourism provides a starting point for practical applications in tourist regions, but the general nature of the concept means that the scope of research on the feasibility of implementation depends on the conditions of a specific area. According to the idea of the ETIS authors, tourist reception areas can take measures to evaluate sustainable tourism by selecting indicators that are useful in a specific region (Font et al., 2021). Research into the possibility of evaluating sustainable tourism in Poland has shown the need for further research into the inconveniences and shortcomings of the statistical data collection system. At the same time, at the national level, no guidelines were introduced for adapting (selecting) ETIS indicators to the conditions of Poland.

The lowest rating was given to the availability of indicators that facilitate the management of the resort, including the survey of tourist satisfaction (Section A). Also rated very low was the availability of indicators of the environmental impact of tourism in a resort (section D), which is surprising given the timeliness of environmental problems in the modern world. In the Polish reporting system, apart from garbage segregation, there is no availability of data providing information on the environmental impact of transportation, climate change, sewage and water management, and energy consumption. It therefore becomes important to introduce a system for collecting information in this area at the regional level. The acquisition of such data is essential to counteract the negative effects of tourism development, the basis of sustainable tourism. In particular, it would be appropriate to improve the collection of statistical data on indicators that received the lowest scores (1 point) in this study.

Another issue that guarantees success in implementing sustainable tourism is proper long-term planning for its development. The use of ETIS indicators to assess the achievement of sustainable tourism goals can also be the basis for planning activities in the region, since the creation of plans and strategies should be preceded by a diagnosis of the baseline situation

(Niezgoda, 2011, Alejziak, 2016). All the more so as new concepts are emerging that assume greater flexibility in forecasting future activities. These include Resilience Planning (Awedyk, Niezgoda, 2018) and Multi-Level Governance (Alejziak, 2016). It should also be borne in mind that the use of ETIS indicators is only one of the concepts for evaluating sustainable tourism in the regions, the creators of which emphasize that the choice of indicators depends on the conditions of the specific tourist destination/center. Other options for evaluating sustainable tourism are based mainly on primary research, which, as indicated in this article, is associated with the long time and high cost of data collection.

## REFERENCES

- Alejziak, W. (2016). Multi-Level Governance jako instrument planowania rozwoju i zarządzania obszarami recepcji turystycznej. In Z. Młynarczyk, A. Zajadacz (Eds.), *Uwarunkowania i plany rozwoju turystyki. Społeczno-ekonomiczne problemy rozwoju turystyki* (pp. 9–32). Poznań: Bogucki Wydawnictwo Naukowe. <http://turystyka.amu.edu.pl/tomy/tir16.pdf>
- Awedyk, M., Niezgoda, A. (2018). Resilience planning as an opportunity for future sustainable development in tourism. *Operations Research and Decisions*, 28(2), 23–40. [https://ord.pwr.edu.pl/assets/papers\\_archive/1334%20-%20published.pdf](https://ord.pwr.edu.pl/assets/papers_archive/1334%20-%20published.pdf)
- Blancas, F.J., Lozano-Oyola, M., González, M., Caballero, R. (2016). Sustainable tourism composite indicators: A dynamic evaluation to manage changes in sustainability. *Journal of Sustainable Tourism*, 24(10), 1403–1424. <https://doi.org/10.1080/09669582.2015.1122014>
- Blažević, V., Hammedi, W., Garnefeld, I., Rust, R.T., Keiningham, T., Andreassen, T.W., Donthu, N., Carl, W. (2013). Beyond traditional word-of-mouth: An expanded model of customer-driven influence. *Journal of Service Management*, 24(3), 294–313. [https://www.researchgate.net/publication/235968356\\_Beyond\\_Traditional\\_Word-of-Mouth\\_An\\_Expanded\\_Model\\_of\\_Customer-Driven\\_Influence](https://www.researchgate.net/publication/235968356_Beyond_Traditional_Word-of-Mouth_An_Expanded_Model_of_Customer-Driven_Influence)
- Brătuțu, B., Băltescu, C.A., Neacsu, N.A., Boscor, D., Tiorean, O.M., Madar, A. (2017). Approaching the sustainable development practices in mountain tourism in the Romanian Carpathians. *Sustainability*, 9, Article 2051. <https://doi.org/10.3390/su9112051>
- Breiby, M.A., Kjendlie Selvaag, S., Øian, H., Duedahl, E., Lurfald, M. (2022). Managing sustainable development in recreational and protected areas. The Dovre case, Norway. *Journal of Outdoor Recreation and Tourism*, 37. <https://doi.org/10.1016/j.jort.2021.100461>
- Castellani, V., Sala, S. (2010). Sustainable performance index for tourism policy development. *Tourism Management*, 31(6), 871–880. <https://doi.org/10.1016/j.tourman.2009.10.001>
- Dimoska, T., Petrevska, B. (2012). Indicators for sustainable tourism development in Macedonia. In *Conference proceedings: First International Conference on Business, Economics and Finance "From Liberalization to Globalization: Challenges in the Changing World", 13–15 September, 2012, Stip, Macedonia*, (pp. 389–400). <https://core.ac.uk/download/pdf/35320667.pdf>
- Eagles, P.F.J., McCool, S.F., Haynes, C.D. (2002). *Sustainable tourism in protected areas: Guidelines for planning and management*. Gland (Switzerland), Cambridge (UK): IUCN, the United Nations Environment Programme and the World Tourism



- Organization. <https://portals.iucn.org/library/sites/library/files/documents/pag-008.pdf>
- European Commission. (2016). *European Tourism Indicators System for sustainable destination management*. Internal Market, Industry, Entrepreneurship and SMEs. Business, Economy, Euro. European Commission (EU). [https://single-market-economy.ec.europa.eu/sectors/tourism/eu-funding-and-businesses/funded-projects/sustainable/indicators\\_en](https://single-market-economy.ec.europa.eu/sectors/tourism/eu-funding-and-businesses/funded-projects/sustainable/indicators_en)
- Fitzgerald, J., Flanagan, S., Griffin, K., Morrissey, M., Kennedy-Burke, E. (2012). DIT-ACHIEV model for sustainable tourism management: Lessons learned from implementing a holistic model of sustainable tourism indicators. In K.F. Hyde, C. Ryan, A.G. Woodside (Eds.), *Advances in culture, tourism and hospitality research: Vol. 6. Field guide to case study research in tourism, hospitality and leisure* (pp. 387–408). Bingley (UK): Emerald Group Publishing Limited. [https://doi.org/10.1108/S1871-3173\(2012\)0000006024](https://doi.org/10.1108/S1871-3173(2012)0000006024)
- Font, X., Torres-Delgado, A., Crabolu, G., Palomo Martinez, J., Kantenbacher, J., Miller G. (2021). The impact of sustainable tourism indicators on destination competitiveness: The European Tourism Indicator System. *Journal of Sustainable Tourism*. <https://doi.org/10.1080/09669582.2021.1910281>
- Gasparini, M.L., Mariotti, A. (2021). Sustainable tourism indicators as policy making tools: Lessons from ETIS implementation at destination level. *Journal of Sustainable Tourism*. <https://doi.org/10.1080/09669582.2021.1968880>
- Kazimierczak, M. (2010). Jaką aksjologię zakłada idea zrównoważonego rozwoju w turystyce? In Z. Młynarczyk, I. Potocka, A. Zajadacz (Eds.), *Uwarunkowania i plany rozwoju turystyki: Vol. 6. Turystyka zrównoważona* (pp. 9–18). Poznań: Bogucki Wydawnictwo Naukowe. <http://turystyka.amu.edu.pl/tomy/tir6.pdf>
- Kowalczyk, A. (2010). Turystyka zrównoważona – aspekty kulturowe. In Z. Młynarczyk, I. Potocka, A. Zajadacz (Eds.), *Uwarunkowania i plany rozwoju turystyki: Vol. 6. Turystyka zrównoważona* (pp. 19–30). Poznań: Bogucki Wydawnictwo Naukowe. <http://turystyka.amu.edu.pl/tomy/tir6.pdf>
- Krajnović, A., Zdrilić, I., Miletić, N. (2020). ETIS indicators in sustainable tourist destination – example of the island of Pag. *Journal of Accounting and Management*, 1(10), 9–28. <https://hrcaak.srce.hr/en/file/355801>
- Lew, A.A., Ng, P.T., Ni, C.-c., Wu, T.-c. (2016) Community sustainability and resilience: Similarities, differences and indicators. *Tourism Geographies*, 18(1), 18–27. <https://doi.org/10.1080/14616688.2015.1122664>
- Majewska, J. (2018). Instrumenty polityki turystycznej władz samorządowych. *Ruch Prawniczy, Ekonomiczny i Socjologiczny*, 74(2), 191–208. <https://doi.org/10.14746/rpeis.2012.74.2.14>
- Maguire, K., McLoughlin, E. (2020). An evidence informed approach to planning for event management in Ireland: An examination of the European tourism indicator system. *Journal of Place Management and Development*, 13(1), 47–72. <https://doi.org/10.1108/JPMMD-06-2019-0041>
- Markiewicz, E., Niezgoda, A. (2022). Inicjatywa społeczna w kształtowaniu tożsamości lokalnej – przykład projektu “Cichy Memoriał” (region Podkarpacia). *Turystyka Kulturowa*, 1(122), 26–46. [https://www.researchgate.net/publication/360808648\\_Inicjatywa\\_spoleczna\\_w\\_ksztaltowaniu\\_tozsamosci\\_lokalnej\\_-przyklad\\_projektu\\_Cichy\\_Memorial\\_region\\_Podkarpacia](https://www.researchgate.net/publication/360808648_Inicjatywa_spoleczna_w_ksztaltowaniu_tozsamosci_lokalnej_-przyklad_projektu_Cichy_Memorial_region_Podkarpacia)
- Marković Vukadin, I., Zovko, M., Krešić, D. (2020). Review and evaluation of existing international systems of tourism sustainability indicators. *Hrvatski Geografski Glasnik / Croatian Geographical Bulletin*, 82(1), 85–110. <https://doi.org/10.21861/HGG.2020.82.01.04>
- McLoughlin, E., Hanrahan, J., Duddy, A.M. (2020). Application of the European Tourism Indicator System (ETIS) for sustainable destination management: Lessons from County Clare, Ireland. *International Journal of Culture, Tourism and Hospitality Research*, 14(2), 273–294. <https://doi.org/10.1108/IJCTHR-12-2019-0230>
- Modica, P., Capocchi, A., Foroni, I., Zenga, M. (2018). An assessment of the implementation of the European Tourism Indicator System for sustainable destinations in Italy. *Sustainability*, 10(9), 31–60. <https://doi.org/10.3390/su10093160>
- Niezgoda, A. (2006). Obszar recepcji turystycznej w warunkach rozwoju zrównoważonego. *Prace Habilitacyjne / Akademia Ekonomiczna w Poznaniu*, 24, 1–299. Poznań: Wydawnictwo Akademii Ekonomicznej w Poznaniu.
- Niezgoda, A. (2011). The role of environmental knowledge, attitudes and initiatives in the development of a tourism product. *Turyzm/Tourism*, 21(1–2), 33–39. <https://doi.org/10.2478/v10106-011-0004-6>
- Niezgoda, A., Janczak, K., Patelak, K. (2020.) *Ekspertyza na temat wytycznych w zakresie zrównoważonej turystyki*. Łódź: Ministerstwo Rozwoju Pracy i Technologii; Active Group.
- Overvåg, K., Skjeggedal, T., Sandström, C. (2015). Management of mountain areas in Norway and the persistence of local–national conflicts. *Journal of Environmental Planning and Management*, 59(7), 1186–1204. <https://doi.org/10.1080/09640568.2015.1062747>
- Pavlinović Mršić, S., Čale, D. (2020). Analysis of the ETIS system of indicators for the assessment and monitoring of tourism sustainability in the city of Split, Croatia. *Oeconomica Jadertina*, 10(2), 41–58. <https://doi.org/10.15291/oec.3164>
- Pulido-Fernández, J.I., Sánchez-Rivero, M. (2009). Measuring tourism sustainability: Proposal of a composite index. *Tourism Economics*, 15(2), 277–296. <https://doi.org/10.5367/000000009788254377>
- Sangchumngong, A. (2019). Development of a sustainable tourist destination based on the creative economy: A case study of Klong Kone Mangrove Community, Thailand. *Kasetsart Journal of Social Sciences*, 40(3), 642–649. <https://doi.org/10.1016/j.kjss.2018.02.002>
- Scheyvens, R., Biddulph, R. (2018). Inclusive tourism development. *Tourism Geographies*, 20(4), 589–609. <https://doi.org/10.1080/14616688.2017.1381985>
- Sharpley, R. (2002). Sustainability: A barrier to tourism development? In R. Scharpley, D.J. Telfer (Eds.), *Tourism and development. Concepts and issues* (pp. 319–337). Clevedon – Buffalo – Toronto – Sydney: Channel View Publications.
- Światowa Komisja ds. Środowiska i Rozwoju. (1991). *Nasza wspólna przyszłość: Raport Światowej Komisji ds. Środowiska i Rozwoju* (U. Grzełowska, E. Kolanowska, Trans.). Warszawa: Państwowe Wydawnictwo Ekonomiczne. (Original work published 1987: *Report of the World Commission on Environment and Development: “Our common future”*). <https://digitallibrary.un.org/record/139811>
- Torres-Delgado, A., López Palomeque, F. (2014). Measuring sustainable tourism at the municipal level. *Annals of Tourism Research*, 49, 122–137. <https://doi.org/10.1016/j.annals.2014.09.003>
- Torres-Delgado, A., Saarinen, J. (2014). Using indicators to assess sustainable tourism development: A review. *Tourism Geographies*, 16(1), 31–47. <https://doi.org/10.1080/14616688.2013.867530>
- Tudorache, D.M., Simon, T., Frenț C., Musteață-Pavel, M. (2017). Difficulties and challenges in applying the European Tourism Indicators System (ETIS) for sustainable tourist destinations: The case of Brasov County in the Romanian Carpathians. *Sustainability*, 9(10), Article 1879. <https://doi.org/10.3390/su9101879>
- UN standards for measuring tourism. (2008). *On measuring the sustainability of tourism: MST*. United Nations World Tourism Organization [UNWTO]. <https://www.unwto.org/tourism-statistics/measuring-sustainability-tourism>

World Tourism Organization [WTO]. (2004). *Indicators of sustainable development for tourism destinations: A guidebook*. <https://www.e-unwto.org/doi/book/10.18111/9789284407262>

Zabetta, M.C., Sacerdotti, S.L., Mauro, S. (2014). Community-based monitoring in tourism sector: An application of the European Tourism Indicators System in the “ATL del

Cuneese”. In S.-S.S. Keskinarkaus, A.-M.K. Matilainen, S. Barbone, A.-M. Mäkelä (Eds.), *Leadership and governance for sustainable tourism: Proceedings of summer school 2014* (pp. 29–36). Helsinki: University of Helsinki, Ruralia Insitute. <https://helda.helsinki.fi/bitstream/handle/10138/229374/Reports139.pdf?sequence=1#page=31>

---